



## 2015 Blake Street Residential Project

### Initial Study

*prepared by*

**City of Berkeley Planning & Development Department**

Land Use Division

1947 Center Street, 2nd Floor

Berkeley, California 94704

Contact: Sharon Gong, Senior Planner

*prepared with the assistance of*

**Rincon Consultants, Inc.**

449 15th Street, Suite 303

Oakland, California 94612

**January 2021**

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**RINCON CONSULTANTS, INC.**

Environmental Scientists | Planners | Engineers

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Appendix ENG	Energy Calculations
Appendix GEO	Geotechnical Feasibility Study
Appendix HAZ	Phase I Environmental Site Assessment
Appendix NOI	Noise Data
Appendix TIA	Traffic Impact Analysis

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# Initial Study

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## 1. Project Title

2015 Blake Street Residential Project

## 2. Lead Agency Name and Address

City of Berkeley Planning & Development Department, Land Use Division  
1947 Center Street, 2nd Floor  
Berkeley, California 94704

## 3. Contact Person, Phone Number, and Email

Sharon Gong, Senior Planner  
(510) 981-7429  
sgong@cityofberkeley.info

## 4. Project Location

The project site encompasses 0.96 acres (41,735 square feet) and seven parcels at 2001-2015 Blake Street and 2012-2020 Dwight Way (Alameda County Assessor's Parcel Numbers 55-1822-14, 55-1822-13-4, 55-1822-13-3, 55-1822-13-2, 55-1822-21, 55-1822-22, and 55-1822-23) in the City of Berkeley. The site covers an area towards the center of the block enclosed by Dwight Way, Shattuck Avenue, Blake Street, and Milvia Street, and its two longest frontages are along Dwight Way and Blake Street. The site also has a small frontage at Milvia Street, at the corner with Blake Street.

Figure 1 shows the regional location of the project site and Figure 2 shows the project site's immediate location and selected nearby land uses.

## 5. Project Sponsor's Name and Address

Laconia Development, LLC  
1981 North Broadway Suite 145  
Walnut Creek, California 94596

## 6. General Plan Designation

The project site is designated as High Density Residential (HDR) in the 2003 City of Berkeley General Plan. The General Plan defines the HDR designation as "generally characterized by large, multi-family structures conveniently located near transit, the Downtown, the University campus, or BART. Appropriate uses for these areas include residential, community service, schools, institutional, recreational uses, open space, and in some cases where allowed by zoning, ground-floor commercial and office." (City of Berkeley 2003).







Figure 2 Project Site Location



## 7. Zoning

The project site is in the Multi-Family Residential Zoning District (R-4). The Berkeley Municipal Code (BMC) lists the following purposes for the R-4 district (BMC Section 23D.40.020):

- A. Implement Master Plan policy by encouraging development of relatively high density residential areas;
- B. Make available housing for persons who desire both convenience of location and a reasonable amount of Usable Open Space;
- C. Protect adjacent properties from unreasonable obstruction of light and air;
- D. Permit the construction of residential structures, such as residential hotels, and hotels, which will provide housing opportunities for transient or seasonal residents;
- E. Permit the construction of institutional and office uses when such will not be detrimental to the immediate neighborhood.

## 8. Description of Project

The proposed project would involve the following major components:

- Merging the seven parcels within the site into two: “Parcel 1,” 7,261 square feet, at the north portion of the site with frontage along Dwight Way and; “Parcel 2,” 34,485 square feet, at the south portion of the site with frontages along Blake Street and Milvia Street.
- Demolition of the four existing buildings in the southern portion of the site at 2001, 2011, 2015, and 2019 Blake Street.
- Relocation and restoration of the two existing residential buildings at 2012 and 2020 Dwight Way within proposed Parcel 1.
- Construction of two new multi-family residential buildings within proposed Parcel 2.

Figure 3 shows the proposed site plan, and Table 1 provides information about the proposed project.

### **Relocation and Restoration of Two Existing Buildings**

The project would involve relocation and restoration of the two Victorian-style two-story multi-family residential buildings at 2012 and 2020 Dwight Way. Both buildings would be shifted north and east so that they would be completely within the newly created Parcel 1. Figure 4 depicts the existing configuration of the two buildings, and Figure 5 depicts the proposed site plan at the proposed Parcel 1.

The project would also involve rehabilitation of the two buildings, including repairs at the foundations, electrical panel (including new individual electrical meters for some units), and sewer lateral, exterior decks, stairs, siding, and paint, new roofs, new interior paint, doors and trim, fixtures, interior floors, cabinets, countertops, and appliances, and new exterior landscaping. The number of unit and overall layout within each building would remain the same. 2012 Dwight Way contains four units and 2020 Dwight Way contains three units. The tenants within the existing units would be offered temporary housing by the developer during the relocation and restoration of the buildings consistent with the requirements of BMC Chapter 13.84. Seven new parking spaces for the

Figure 3 Proposed Site Plan – Entire Project

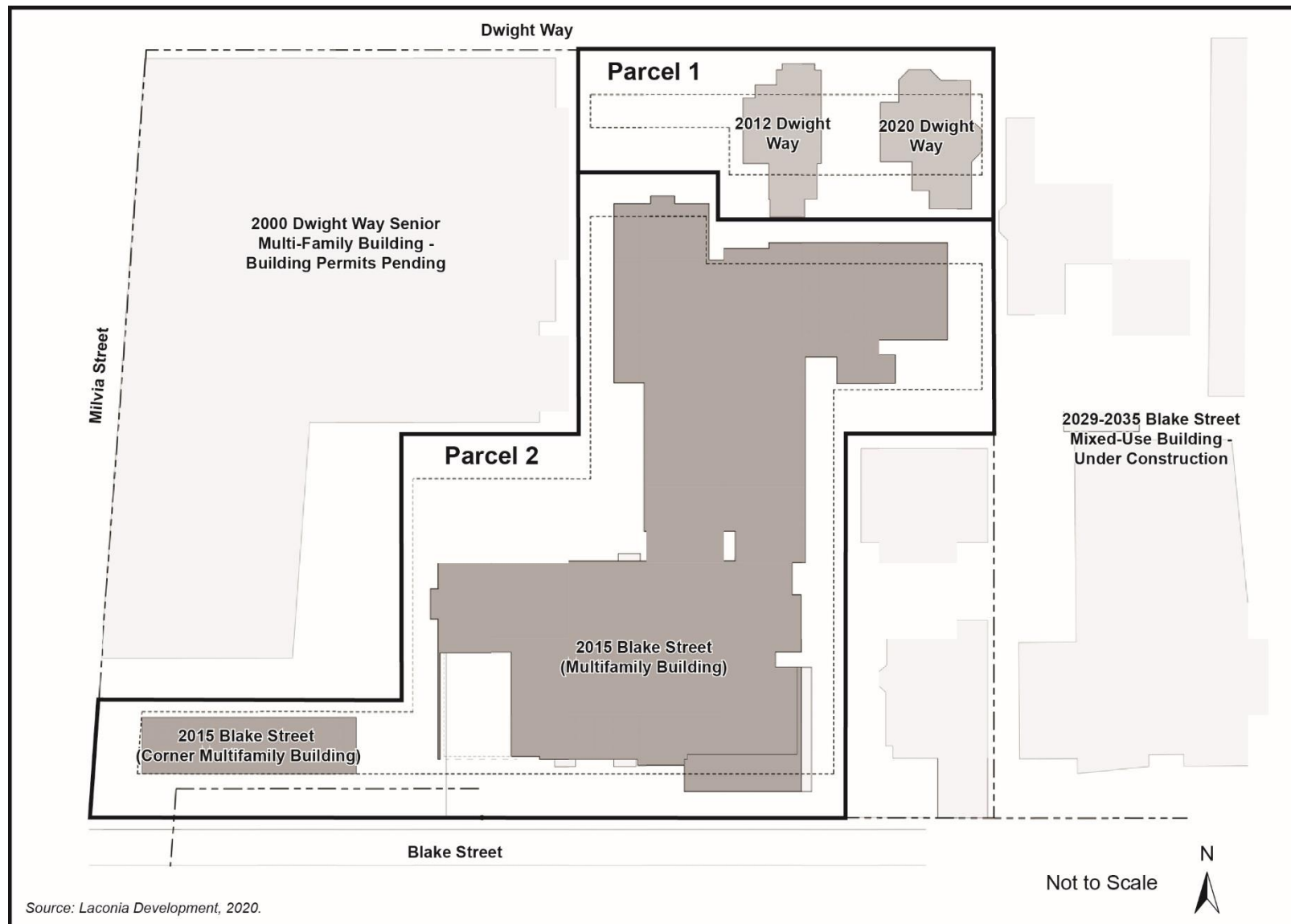
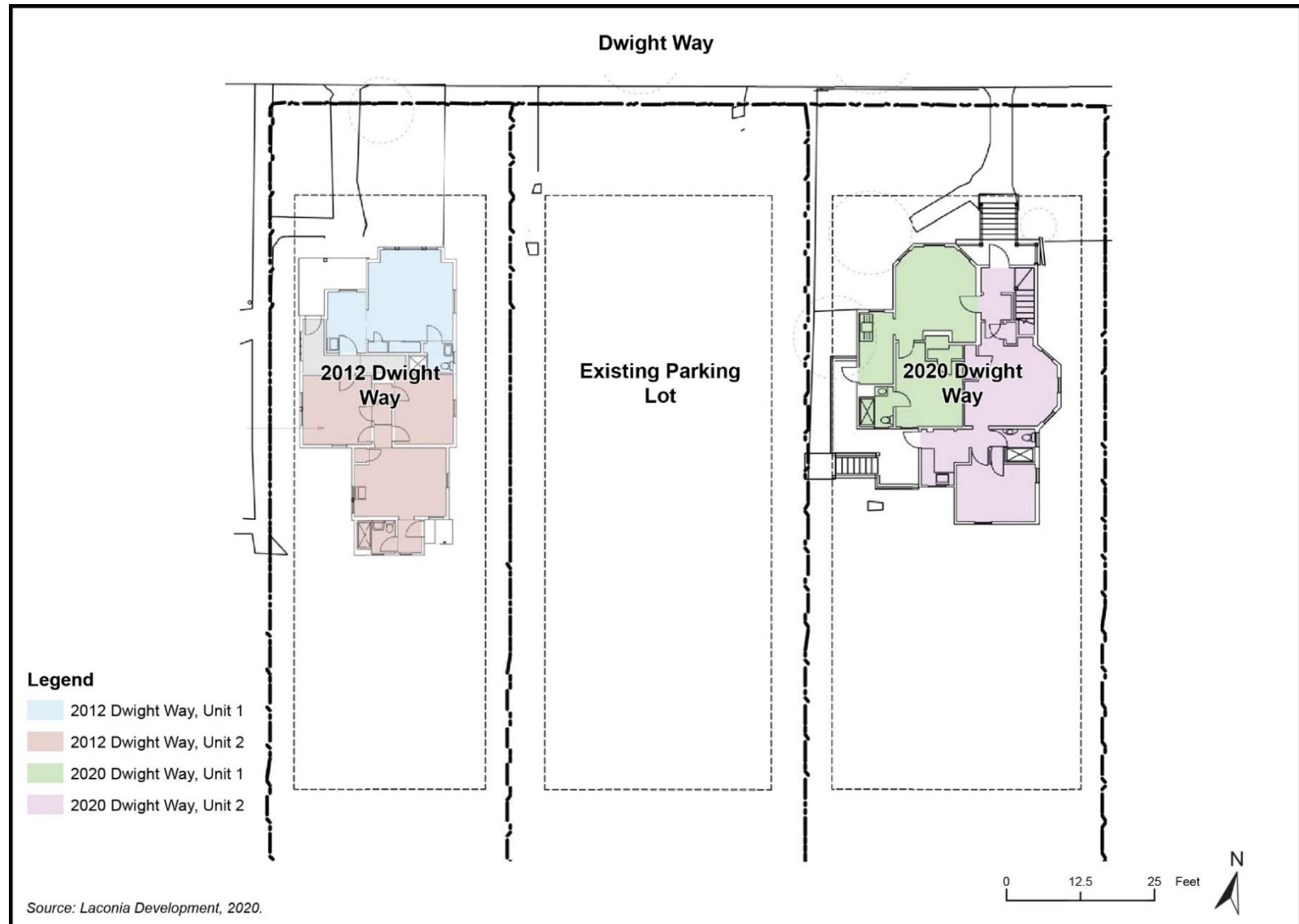
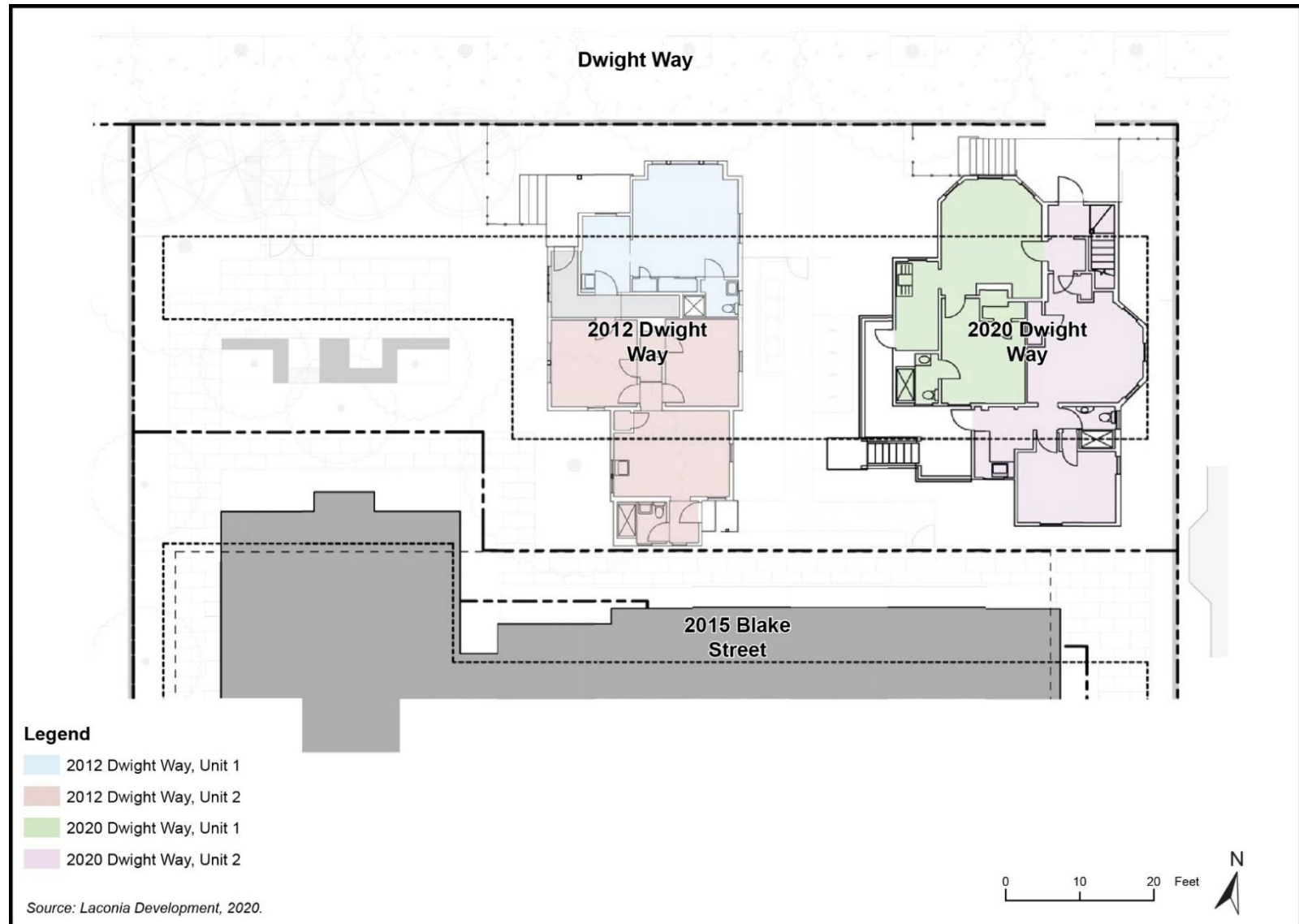


Figure 4 Existing Site Plan – 2012 and 2020 Dwight Way





**Figure 5 Proposed Site Plan – 2012 and 2020 Dwight Way**

**Table 1 Project Summary**

<b>Lot Area</b>	
Parcel 1	7,261 sf
Parcel 2	34,485 sf
<b>Total</b>	<b>41,746 sf</b>
<b>Building Area</b>	
<b>Parcel 1</b>	
2012 Dwight Way (Existing Residential Building)	1,131 sf
2020 Dwight Way (Existing Residential Building)	1,156 sf
<b>Parcel 2</b>	
2015 Blake – Corner Multifamily Building	4,116 sf
2015 Blake – Multifamily Building	134,888 sf
<b>Total (Parcel 1 and Parcel 2)</b>	<b>139,004 sf</b>
<b>Dwelling Units</b>	
<b>Parcel 1</b>	
2012 Dwight Way (Existing Residential Building)	4 units
2020 Dwight Way (Existing Residential Building)	3 units
<b>Parcel 2</b>	
2015 Blake – Corner Multifamily Building	6 units
2015 Blake – Multifamily Building	155 units
<b>Total (Parcel 1 and Parcel 2)</b>	<b>168 units</b>
<b>Parking</b>	
Vehicle Parking Spaces	93
Bicycle Parking Spaces	99 (80 long-term, 19 short-term)
<b>Lot Coverage</b>	
Parcel 1	30%
Parcel 2	50%
<b>Useable Open Space</b>	
<b>Parcel 1</b>	
Open Space at ground level	2,914 sf
<b>Parcel 2</b>	
Open Space at ground level	12,172 sf
Roof Deck	2,625 sf
<b>Total (Parcel 1 and Parcel 2)</b>	<b>15,086 sf</b>
sf = square feet	

residents of the two buildings would be provided at the subterranean parking garage below the new seven-story residential building at the proposed Parcel 2.

## **New Residential Development**

The project would involve construction of two new buildings within the proposed Parcel 2. One new building, at the southwest corner of the site at Blake Street and Milvia Street and labeled “Corner Multifamily Building” on Figure 3, would be three stories and include six dwelling units. The footprint of that building would be rectangular and approximately 1,370 square feet, with a 19-foot width along Milvia Street and a 72-foot length along Blake Street. Each story would include two one-bedroom units, which would be separated by a central shared exterior stairway. The building would be approximately 35 feet tall to the top of the roof parapet.

The other new building within the proposed Parcel 2, labeled “Multifamily Building” on Figure 3, would extend from Blake Street northward to the rear of Parcel 1. The building would have a footprint of approximately 16,323 square feet, seven stories, and a height of approximately 82 feet to the top of the roof parapet. The building would include a below-ground basement level, which would include a parking garage, bicycle parking room, and mechanical and trash areas. The building would include 155 dwelling units, including nine units affordable to Very Low Income (VLI) households, which would be distributed throughout the seven floors above the basement. In addition to residential units, the ground floor would include a main entrance, lobby, and mailroom at Blake Street near the southeastern corner of the site.

The exterior design of the two new buildings would be modern, with rectangular forms, and would include a combination of painted stucco and cement and metal panels. Figure 6 depicts the proposed front elevations of the two new buildings as they would be viewed from Blake Street, and Figure 7 depicts the proposed Multifamily Building as it would be viewed from Dwight Way, behind the rehabilitated existing buildings.

## **Parking and Site Access**

The subterranean garage at the Multifamily Building on Parcel 2 would provide off-street vehicle and bicycle parking spaces for residents of all buildings on the project site, including the two existing renovated buildings. The garage would be accessed by vehicles from a driveway along Blake Street and would include 93 vehicle parking spaces (in stackers) and 80 bicycle parking spaces. Residents could also enter the garage on foot from the elevators or an exterior stairway near the northeastern corner of the building.

## **Amenities**

The project would provide new outdoor open space at ground level, including approximately 11,560 square feet of usable open space as defined in BMC Section 23D.04.050, via gardens, gathering spaces, and other landscaped areas surrounding the buildings. These spaces would include two “Private Gardens,” one at the western portion of Parcel 1, abutting 2012 Dwight Way, and one at a courtyard west of the 2015 Multifamily Building. In addition to ground-level open space, the seven-story Multifamily Building would include one outdoor roof deck at the northern edge of the seventh floor, which would be 2,625 square feet. The outdoor deck would connect to an indoor common amenity space, which would include an approximately 500 square-foot fitness room and an approximately 1,000 square-foot lounge.



**Figure 6 Proposed Front Elevation from Blake Street**



**Figure 7 Proposed Front Elevation from Dwight**



## Landscaping

The project would include removal of seven trees on the site and nine street trees. Subject to review and approval by the City Arborist, new trees would be planted along the site's three street frontages, including approximately five Red Maple trees (*Acer rubrum*) along Dwight Way and approximately 14 water Gum trees (*Tristania laurina*) along Blake Street and Milvia Street.

Approximately 19 percent of the project site would be landscaped. These areas would include various native shrubs and grasses, and new trees, including Paperbark trees (*Melaleuca quinquinervia*), Peppermint trees (*Agonis*), and Red Maple trees. The site would also include several bioretention planters, which would be located near the edges of the buildings.

## Green Building Features

The proposed project would be required to comply with several City of Berkeley green building requirements, including the following:

- Per BMC Chapter 19.37, diversion of waste during construction would comply with BMC Chapter 19.37, including 100% of asphalt, concrete, excavated soil and land-clearing debris and a minimum of 65% of other nonhazardous construction and demolition waste.
- Per BMC Chapter 19.37, at least twenty percent of the total number of parking spaces (19 spaces) would be electric vehicle charging spaces (EV spaces) and at least eighty percent (74 spaces) would be equipped with EV raceways and capable of supporting future EV equipment
- Per the California Water Efficient Landscape Ordinance (WELO), outdoor landscaped areas would employ landscape irrigation and water efficiency best practices
- Per BMC Chapter 12.80, the proposed new construction (the Multifamily Building and Corner Multifamily Building at 2015 Blake Street) would be all-electric and would not use natural gas. (The existing buildings at 2012 and 2020 Dwight Way proposed to be relocated and renovated would continue to be supplied by natural gas.)

The project would also include additional green building features, including built-in composting and recycling centers, efficient clothes washing and drying machines, and high efficiency lighting. Given these features, the project is expected to attain at least 112 points in the GreenPoint Rated Checklist.

## Construction

To complete the construction of the project, including the subterranean parking garage, grading would take place over most of project site, and approximately 18,360 cubic yards of soil would be exported. Excavation for the subterranean parking garage would reach a maximum depth of approximately 24 feet. New building foundations would be designed and installed without the use of pile drivers. Project implementation, including demolition, and construction, as well as renovation, would take approximately 26 months.

## 9. Surrounding Land Uses and Setting

The project site is located between the downtown and south Berkeley neighborhoods, one block west of Shattuck Avenue. The surrounding area is characterized by a mix of uses, including commercial and residential. Nearby commercial uses are primarily offices and medical offices,

including offices in converted residential buildings. The converted buildings are concentrated along Milvia Street west and south of the project site. Two large medical buildings, the Alta Bates Medical Center and the Sutter Urgent Care Center, are north and west of the site, across Dwight Way and Milvia Street, respectively. Nearby residential uses include two multi-family apartment buildings on the lot that abuts the site to the east on Dwight Way. Other residential uses, including single-family dwellings, duplexes, and multi-family dwelling apartment buildings, tend to be concentrated south of the project site, across Blake Street. The heights of buildings in the neighborhood range between one and three stories.

A five-story mixed-use building at 2029 Blake Street, east of the project site, is currently under construction. In September 2020, the City is approved an entitlement application for a new six-story senior housing development submitted for 2000 Dwight Way, which will encompass six lots abutting the project site to the west along Dwight Way and Milvia Street. Figure 2 shows the locations of those two projects.

The project site comprises seven parcels and six existing buildings. Three of the existing buildings, at 2011, 2015 and 2019 Blake Street are commercial. The buildings at 2015 and 2019 Blake Street are rectangular one-story buildings that cover an entire parcel and are separated by another parcel, currently being used as a surface parking lot. The one-story building at 2011 Blake Street abuts 2015 Blake Street to the west. The other three buildings, at 2001 Blake Street, and 2012 and 2020 Dwight Way are permitted as residential uses, but the building at 2001 Blake Street is currently being used as medical offices. The buildings along Dwight Way are both two-story multi-family residential buildings and are separated by a shared surface parking lot. The site is relatively flat and includes minimal landscaping, primarily at the front and side yards around the residential buildings.

## 10. Other Public Agencies Whose Approval is Required

The project would require approval of several Use Permits and a State Density Bonus by the City of Berkeley Zoning Adjustments Board.

No additional discretionary public agency permits or approvals would be required for this project.

## 11. Have California Native American Tribes Traditionally and Culturally Affiliated with the Project Area Requested Consultation Pursuant to Public Resources Code Section 21080.3.1?

The City of Berkeley prepares and mails a formal notification letter with the City's list of active projects to the Chochenyo Ohlone on a monthly basis, in accordance with the provisions of AB 52. The email including this project was sent out on February 4, 2019. As of the date of this report, no response has been received regarding this project, and no tribal cultural resources have been identified on site.

## 12. Project Objectives

The objectives for the proposed project include:

1. Redevelop a site containing underutilized commercial buildings and surface parking lots to create a vibrant residential address with an attractive pedestrian environment.
2. Construct high-density in-fill residential development near existing public transit and commercial goods and services.
3. Construct new housing, including affordable housing, that would help the City satisfy its regional housing needs.
4. Preserve existing residential uses on the site.

## Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is “Potentially Significant” or “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

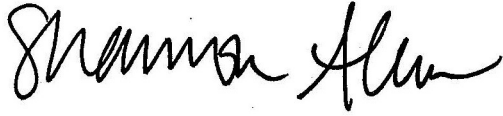
- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality                                   | <input type="checkbox"/> Biological Resources      |
| <input checked="" type="checkbox"/> Cultural Resources      | <input type="checkbox"/> Energy  | <input checked="" type="checkbox"/> Geology/Soils  |
| <input type="checkbox"/> Greenhouse Gas Emissions           | <input type="checkbox"/> Hazards and Hazardous Materials               | <input type="checkbox"/> Hydrology/Water Quality   |
| <input type="checkbox"/> Land Use/Planning                  | <input type="checkbox"/> Mineral Resources                             | <input type="checkbox"/> Noise                     |
| <input type="checkbox"/> Population/Housing                 | <input type="checkbox"/> Public Services                               | <input type="checkbox"/> Recreation                |
| <input type="checkbox"/> Transportation                     | <input type="checkbox"/> Tribal Cultural Resources                     | <input type="checkbox"/> Utilities/Service Systems |
| <input type="checkbox"/> Wildfire                           | <input checked="" type="checkbox"/> Mandatory Findings of Significance |  |

## Determination

Based on this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☐ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions to the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☒ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a “potentially significant impact” or “less than significant with mitigation incorporated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

- ☐ I find that although the proposed project could have a significant effect on the environment, because all potential significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



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Signature

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Shannon Allen

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Printed Name

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January 6, 2021

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Date

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Principal Planner

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Title

# Environmental Checklist

## 1 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with existing zoning for agricultural use or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?*
- b. *Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?*
- c. *Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)); timberland (as defined by Public Resources Code*



*Section 4526); or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?*

- d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?*
- e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?*

The site is not identified as a farmland type under the Farmland Mapping and Monitoring Program, is not enrolled in Williamson Act contracts, and does not support forest land or resources (California Department of Conservation (DOC) 2016). According to DOC maps, the project site and surrounding neighborhood is categorized as "Urban and Built-Up Land." The area is not located on or adjacent to agricultural land or forest land, and thus the proposed project would not involve the conversion of farmland to non-agricultural uses. For these reasons, the project would have no impact with respect to conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use; conflict with existing agricultural zoning or Williamson Act contract; result in the loss of forest land or conversion of forest land to non-forest use; or other conversion of farmland to non-agricultural use and further analysis in an EIR is not warranted.

**NO IMPACT**

## 2 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Air Quality Standards and Attainment

The project site is located within the San Francisco Bay Area Air Basin (the Basin), which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). As the local air quality management agency, BAAQMD is required to monitor air pollutant levels to ensure that state and federal air quality standards are met and, if they are not met, to develop strategies to meet the standards.

Depending on whether or not the standards are met or exceeded, the Basin is classified as being in "attainment" or "nonattainment." Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. BAAQMD is in non-attainment for the state and federal ozone standards, the state and federal PM<sub>2.5</sub> (particulate matter with diameters of up to 2.5 microns) standards and the state PM<sub>10</sub> (particulate matter with diameters of up to 10 microns) standards and is required to prepare a plan for improvement (BAAQMD 2017a).

The health effects associated with criteria pollutants for which the Basin is in non-attainment are described in Table 2.

**Table 2 Health Effects Associated with Non-Attainment Criteria Pollutants**

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: (a) pulmonary function decrements and localized lung edema in humans and animals and (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Suspended particulate matter (PM <sub>10</sub> )	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma). <sup>1</sup>
Suspended particulate matter (PM <sub>2.5</sub> )	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma. <sup>a</sup>

<sup>a</sup> More detailed discussions on the health effects associated with exposure to suspended particulate matter can be found in the following documents: United States Environmental Protection Agency, Air Quality Criteria for Particulate Matter, October 2004.

Source: USEPA 2018

## Air Quality Management

The Bay Area 2017 Clean Air Plan (the 2017 Plan) provides a plan to improve Bay Area air quality and protect public health as well as the climate. The legal impetus for the 2017 Plan is to update the most recent ozone plan, the 2010 Clean Air Plan, to comply with state air quality planning requirements as codified in the California Health & Safety Code. Although steady progress in reducing ozone levels in the Basin has been made, the region continues to be designated as non-attainment for both the one-hour and eight-hour state ozone standards. In addition, emissions of ozone precursors in the Bay Area contribute to air quality problems in neighboring air basins. Under these circumstances, state law requires the 2017 Plan to include all feasible measures to reduce emissions of ozone precursors and reduce transport of ozone precursors to neighboring air basins (BAAQMD 2017b).

In 2006, the U.S. Environmental Protection Agency (USEPA) reduced the national 24-hour PM<sub>2.5</sub> standard regarding short-term exposure to fine particulate matter from 65 micrograms per cubic meter (µg/m<sup>3</sup>) to 35 µg/m<sup>3</sup>. Based on air quality monitoring data for the 2006-2008 cycle showing that the region was slightly above the standard, the USEPA designated the Basin as non-attainment for the 24-hour national standard in December 2008. This triggered the requirement for the BAAQMD to prepare a State Implementation Plan (SIP) submittal to demonstrate how the region would attain the standard. However, data for both the 2008-2010 and the 2009-2011 cycles showed that PM<sub>2.5</sub> levels in the Basin currently meet the standard. On October 29, 2012, the USEPA issued a proposed rule-making to determine that the Basin now attains the 24-hour PM<sub>2.5</sub> national standard. Based on this, the Basin is required to prepare an abbreviated SIP submittal, which includes an emission inventory for primary (directly-emitted) PM<sub>2.5</sub>, as well as precursor pollutants that contribute to formation of secondary PM in the atmosphere; and amendments to BAAQMD New Source Review (NSR) to address PM<sub>2.5</sub> (adopted December 2012). However, key SIP requirements to

demonstrate how a region will achieve the standard (i.e., the requirement to develop a plan to attain the standard) will be suspended as long as monitoring data continues to show that the Basin attains the standard.

In addition to preparing the “abbreviated” SIP submittal, the BAAQMD has prepared a report entitled “Understanding Particulate Matter: Protecting Public Health in the San Francisco Bay Area” (BAAQMD 2012). The report helps guide the BAAQMD’s on-going efforts to analyze and reduce PM in the Bay Area in order to better protect public health.<sup>1</sup> The Basin will continue to be designated as nonattainment for the federal 24-hour PM<sub>2.5</sub> standard until such time as the BAAQMD elects to submit a “redesignation request” and a “maintenance plan” to the USEPA, and the USEPA approves the proposed redesignation.

## **Air Emission Thresholds**

This analysis uses BAAQMD’s 2017 CEQA Air Quality Guidelines (2017c) to evaluate air quality impacts for construction and operation. The BAAQMD developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant air quality impacts. If all of the screening criteria are met by a project, then the lead agency or applicant does not need to perform a detailed air quality assessment of their project’s air pollutant emissions. These screening levels are generally representative of new development on greenfield sites without any form of mitigation measures taken into consideration (BAAQMD 2017c).

### *Construction*

For mid-rise multi-family residential developments such as the proposed project, BAAQMD’s construction-related screening size is 240 dwelling units. The proposed project would involve 168 dwelling units and is therefore well below the construction screening criteria. However, if a project includes demolition, the screening criteria for construction may not be used to preclude evaluation of the project’s construction-related criteria pollutant emissions. Therefore, because the project would involve demolition of several existing buildings on the project site, the screening criteria for construction cannot be used. As a result, the BAAQMD significance thresholds for criteria air pollutants were analyzed.

Table 3 presents the numeric significance thresholds for construction-related criteria air pollutant and precursor emissions adopted by BAAQMD. These represent the levels at which a project’s individual emissions of criteria air pollutants or precursors during construction would result in a cumulatively considerable contribution to the Basin’s existing air quality conditions. If the project’s construction-related criteria pollutant emissions exceed the thresholds shown in Table 3, the proposed project would result in a significant construction-related air quality impact.

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<sup>1</sup> PM is made up of particles that are emitted directly, such as soot and fugitive dust, as well as secondary particles that are formed in the atmosphere from chemical reactions involving precursor pollutants such as oxides of nitrogen, sulfur oxides, volatile organic compounds, and ammonia.

**Table 3 Criteria Air Pollutant Significance Thresholds for Construction**

Pollutant	Average Daily Emissions (lbs/day)
ROG	54
NO <sub>x</sub>	54
PM <sub>10</sub>	82 (exhaust)
PM <sub>2.5</sub>	54 (exhaust)
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices

Source: BAAQMD 2017c

### Operation

For mid-rise multi-family residential developments such as the proposed project, BAAQMD's operational screening size is 494 dwelling units. The proposed project would involve 168 dwelling units and is therefore well below the operational screening criteria. Therefore, per BAAQMD guidance, a detailed air quality assessment of the project's criteria air pollutant emissions in comparison to numeric thresholds is not necessary (BAAQMD 2017c).

### Methodology

The project's construction emissions were estimated using the California Emissions Estimator Model (CalEEMod), version 2016.3.2. CalEEMod uses project-specific information, including the project's land uses, square footages for different uses (e.g., multi-family dwelling units, subterranean parking structure), and location, to model a project's emissions.

Construction emissions modeled include emissions generated by construction equipment used on-site and emissions generated by vehicle trips associated with construction, such as worker and vendor trips. CalEEMod estimates construction emissions by multiplying the amount of time equipment is in operation by emission factors. Construction of the proposed project was analyzed based on the applicant-provided construction schedule and construction equipment list. It is assumed that all construction equipment used would be diesel-powered. This analysis assumes that the project would comply with all applicable regulatory standards. In particular, the project would comply with 2019 CALGreen requirements and the 2019 Building Energy Efficiency Standards. In addition, the City of Berkeley has adopted more stringent local amendments to 2019 CALGreen (BMC Chapter 19.37) and to the 2019 Building Energy Efficiency Standards (BMC Chapter 19.36).

### Impact Analysis

*a. Would the project conflict with or obstruct implementation of the applicable air quality plan?*

The California Clean Air Act requires that air districts create an air quality plan that describes how the jurisdiction will meet air quality standards. These plans must be updated every three years. The most recently adopted air quality plan in the Basin is the 2017 Plan. As described under *Air Quality Management*, the 2017 Plan updates the most recent ozone plan - the 2010 Clean Air Plan - pursuant to air quality planning requirements defined in the California Health & Safety Code. To fulfill State ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors (reactive organic gases and nitrogen oxides) and reduce transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Plan builds upon and enhances the air district's efforts to reduce emissions of fine particulate matter and toxic air contaminants. The 2017 Plan does not include control measures that apply directly to individual

development projects. Instead, the control strategy includes measures related to stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-greenhouse gas (GHG) pollutants.

The 2017 Plan focuses on two paramount goals (BAAQMD 2017b):

- Protect air quality and health at the regional and local scale by attaining all state and national air quality standards and eliminating disparities among Bay Area communities in cancer health risk from toxic air contaminants; and
- Protect the climate by reducing Bay Area GHG emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050

Under BAAQMD's methodology, a determination of consistency with the 2017 Plan should demonstrate that a project (BAAQMD 2017c):

- Supports the primary goals of the 2017 Clean Air Plan;
- Includes applicable control measures from the 2017 Clean Air Plan; and
- Would not disrupt or hinder implementation of any control measures in the 2017 Clean Air Plan.

A project that would not support the 2017 Plan's goals would not be considered consistent with the 2017 Plan. On an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support for the 2017 Plan's goals. As shown in the discussion under checklist items *b* and *c* (see below), the project would not result in exceedances of BAAQMD thresholds for criteria air pollutants and thus would not conflict with the 2017 Plan's goal to attain air quality standards. Furthermore, as shown in Table 4, the proposed project would include applicable control measures from the 2017 Clean Air Plan and would not disrupt or hinder implementation of such control measures. Therefore, the proposed project would result in a less than significant impact related to consistency with the 2017 Plan. Further analysis in an EIR is unwarranted.

**Table 4 Project Consistency with Applicable Control Strategies of 2017 Clean Air Plan**

Control Strategy	Evaluation
Direct new development to areas that are well served by transit, and conducive to bicycling and walking.	<b>Consistent.</b> The project would involve increased residential density in a transit priority area as defined Section 21064.3 of the California Public Resources Code. The site is within walking distance of stops for several AC Transit bus lines and the Downtown Berkeley Bay Area Rapid Transit (BART) Station. The site is also within walking distance of Downtown Berkeley, including commercial shops and services.
Reduce demand for vehicle travel, and high-carbon goods and services.	<b>Consistent.</b> As discussed in Section 17, <i>Transportation</i> , daily VMT associated with the proposed project would be approximately 7.9 VMT per capita, which would be approximately 47 percent lower than the Bay Area regionwide average of 15.0 VMT per capita.
Promote energy and water efficiency in both new and existing buildings.	<b>Consistent.</b> The proposed project would be required to comply with 2019 CALGreen standards and BMC Chapter 19.37 which include measures for energy and water efficiency.

Source: BAAQMD 2017b

## LESS THAN SIGNIFICANT IMPACT

- b. *Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?*

The proposed project would result in temporary construction emissions and long-term operational emissions. Construction activities such as the operation of construction vehicles and equipment over unpaved areas, grading, trenching, and disturbance of stockpiled soils have the potential to generate fugitive dust (PM<sub>10</sub>) through the exposure of soil to wind erosion and dust entrainment. In addition, exhaust emissions associated with heavy construction equipment would generate criteria air pollutant emissions. Long-term emissions associated with operational impacts would include emissions from vehicle trips (mobile sources), natural gas use (energy sources), and landscape maintenance equipment, consumer products, and architectural coating associated with on-site development (area sources).

## Construction Emissions

### Criteria Air Pollutant Emissions

As noted in the project description, construction would occur over approximately 26 months. Table 5 summarizes the estimated maximum daily emissions of criteria air pollutants during construction on the project site. Complete CalEEMod worksheets are in Appendix AIR. As shown in the table, construction emissions would not exceed BAAQMD thresholds. Therefore, impacts would be less than significant and further analysis in an EIR is unwarranted.

**Table 5 Construction Emissions**

Year	Daily Emissions (lbs/day)					
	ROG	NO <sub>x</sub>	CO	PM <sub>10</sub> (exhaust)	PM <sub>2.5</sub> (exhaust)	SO <sub>x</sub>
Maximum Daily Emissions <sup>1</sup>	13.2	50.1	32.1	1.7	1.5	0.1
BAAQMD Thresholds (average daily emissions)	54	54	N/A	82	54	N/A
Threshold Exceeded?	No	No	N/A	No	No	N/A

<sup>1</sup> See Table 2.1 "Overall Construction-Unmitigated" emissions. CalEEMod worksheets in Appendix AIR. Emission data presented is the highest of winter or summer outputs.

N/A = not adopted (The BAAQMD has not adopted thresholds for construction emissions of CO or SO<sub>x</sub>); lbs/day = pounds per day; ROG = reactive organic gases; NO<sub>x</sub> = oxides of nitrogen; CO = carbon monoxide; PM<sub>2.5</sub> = particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM<sub>10</sub> = particulate matter with an aerodynamic resistance diameter of 10 micrometers or less; SO<sub>x</sub> = oxides of sulfur

### Fugitive Dust

Site preparation and grading may cause wind-blown dust that could contribute particulate matter into the local atmosphere. The BAAQMD has not established a quantitative threshold for fugitive dust emissions but rather states that projects that incorporate best management practices (BMPs) for fugitive dust control during construction would have a less than significant impact related to fugitive dust emissions. The project would be subject to the following standard condition of approval, which requires implementation of BAAQMD recommendations related to fugitive dust:

Public Works – Implement BAAQMD-Recommended Measures during Construction. For all proposed projects, BAAQMD recommends implementing all the Basic Construction Mitigation Measures, listed below to meet the best management practices threshold for fugitive dust:

- A. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- B. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- C. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- D. All vehicle speeds on unpaved roads shall be limited to 15 mph.
- E. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- F. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- G. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator.
- H. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Compliance with the above condition of approval would ensure that construction-related fugitive dust emissions would be less than significant. Further analysis in an EIR is unwarranted.

## **Operational Emissions**

As described under *Air Emission Thresholds* above, the proposed project would involve 168 dwelling units, below BAAQMD's operational criteria pollutant screening size for multi-family residential projects, 494 dwelling units. As a result, per BAAQMD guidance, a detailed air quality assessment of the project's criteria air pollutant emissions is not necessary, and project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Impacts would be less than significant, and further analysis in an EIR is unwarranted.

## **LESS THAN SIGNIFICANT IMPACT**



c. *Would the project expose sensitive receptors to substantial pollutant concentrations?*

Certain population groups, such as children, the elderly, and people with health problems, are particularly sensitive to air pollution. Sensitive receptors are defined as population groups that are more susceptible to exposure to pollutants and examples include health care facilities, retirement homes, school and playground facilities, and residential areas. The nearest sensitive land uses are multi-family residential buildings at the northern portion of the project site, 2012 and 2020 Dwight Way. These uses could be exposed to toxic air contaminants (TACs), which are defined by California law as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health.

## **Carbon Monoxide Hotspots**

A CO hotspot is a localized concentration of CO that is above a CO ambient air quality standard. Localized CO hotspots can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal one-hour standard of 35.0 parts per million (ppm) or the federal and state eight-hour standard of 9.0 ppm (CARB 2016).

BAAQMD recommends comparing project's attributes with the following screening criteria as a first step to evaluating whether the project would result in the generation of CO concentrations that would substantially contribute to an exceedance of the *Thresholds of Significance*. The project would result in a less than significant impact to localized CO concentrations if:

1. The project is consistent with an applicable congestion management program for designated roads or highways, regional transportation plan, and local congestion management agency plans
2. The project would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour
3. The project traffic would not increase traffic volumes at the affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage).

The project would include 168 residential units. Based on the Transportation Impact Analysis, the project would result in a net increase of about 25 vehicle trips during the AM peak hour and 29 trips during the PM peak hour (Appendix TIA). As described in Section 13, *Noise*, to determine existing traffic volumes along area roadways, a traffic count was taken along Dwight Way at the location of Noise Measurement (NM) 3 over a 15-minute interval. During the 15-minute interval at NM 3, 51 vehicles were counted. Traffic numbers were multiplied by four to obtain an approximate hourly traffic volume of 204 vehicles along Dwight Way. Therefore, existing traffic volumes at the intersections that would be affected by these new trips are lower than the screening criteria above, and the increase in project trip generation would not exceed the screening thresholds listed above. Therefore, the impact of localized CO emissions would be less than significant.

## **Toxic Air Contaminants**

### *Construction Impacts*

Construction-related activities would result in temporary project-generated emissions of diesel particulate matter (DPM) exhaust emissions from off-road, heavy-duty diesel equipment for site

preparation, grading, building construction, and other construction activities. DPM was identified as a TAC by CARB in 1998 (CARB 2017).

Generation of DPM from construction projects typically occurs in a single area for a short period. Construction of the proposed project would occur over approximately 26 months. The dose to which the receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the extent of exposure that person has with the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher exposure level for the Maximally Exposed Individual. The risks estimated for a Maximally Exposed Individual are higher if a fixed exposure occurs over a longer period of time. The relocated and renovated buildings at 2012 and 2020 Dwight Way could be occupied during construction of the two new buildings at the southern portion of the site (2001 and 2015 Blake Street). Therefore, construction activity could intermittently occur as close as ten feet from these nearest sensitive receptors. For this project, the nearest Maximally Exposed Individuals would be the residents in of 2012 and 2020 Dwight Way. According to the Office of Environmental Health Hazard Assessment, health risk assessments, which determine the exposure of sensitive receptors to toxic emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period/duration of activities associated with the project. Thus, the duration of proposed construction activities (i.e., 26 months) is approximately 3 percent of the total exposure period used for health risk calculation. Current models and methodologies for conducting health-risk assessments are associated with longer-term exposure periods of 9, 30, and 70 years, which do not correlate well with the temporary and highly variable nature of construction activities, resulting in difficulties in producing accurate estimates of health risk (BAAQMD 2017c). Therefore, this analysis qualitatively discusses potential health risks associated with construction-related emissions of TACs, focusing on construction activities most likely to generate substantial TAC emissions and the duration of such activities relative to established, longer-term health risk exposure periods.

The maximum PM<sub>10</sub> and PM<sub>2.5</sub> emissions would occur during site preparation and grading activities. These activities would last for approximately three months. PM emissions would decrease for the remaining construction period because construction activities such as building construction and architectural coating would require less construction equipment. While the maximum DPM emissions associated with site preparation and grading activities would only occur for a portion of the overall construction period, these activities represent the maximum exposure condition for the total construction period. The duration of site preparation and grading activities would represent less than one percent of the total exposure period for a 70-year health risk calculation.<sup>2</sup> Therefore, DPM generated by project construction would not create conditions where the probability is greater than 10 in one million of contracting cancer for the Maximally Exposed Individual or to generate ground-level concentrations of non-carcinogenic TACs that exceed a Hazard Index greater than one for the Maximally Exposed Individual. This impact would be less than significant.

### *Operational Impacts*

In the Bay Area, a number of urban or industrialized communities exist where the exposure to TACs is relatively high compared to other communities. However, according to the BAAQMD CEQA Guidelines, the project site is not located in an impacted community (BAAQMD 2017b). Sources of TACs include, but are not limited to, land uses such as freeways and high-volume roadways, truck distribution centers, ports, rail yards, refineries, chrome plating facilities, dry cleaners using

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<sup>2</sup> (2 months / [12 months x 70 years]) x 100 = 0.24 percent

perchloroethylene, and gasoline dispensing facilities. The project would not involve any of these uses; therefore, it is not considered a source of TACs. Therefore, it would not expose nearby sensitive receptors to substantial pollutant concentrations and impacts would be less than significant and further analysis in an EIR is unwarranted.

**LESS THAN SIGNIFICANT IMPACT**

- d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?*

Table 3-3 in the BAAQMD's 2017 CEQA Guidelines provides odor screening distances for land uses that have the potential to generate substantial odor complaints. The odor-generating uses in the table include wastewater treatment plants, landfills or transfer stations, refineries, composting facilities, confined animal facilities, food manufacturing, smelting plants, and chemical plants (BAAQMD 2017c). The proposed project involves residential uses and does not include any of the uses identified by the BAAQMD as odor-generating uses. Therefore, the proposed project would not generate objectionable odors affecting a substantial number of people. This impact would be less than significant and further analysis in an EIR is unwarranted.

**LESS THAN SIGNIFICANT IMPACT**

### 3 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Existing Setting

The project site is located in a developed commercial and residential area in incorporated Berkeley. Most of the site is covered by paving or existing buildings. The project site experiences extensive human disturbance during, including regular vehicle movement over much of the paved areas. Fencing along most of the perimeter the parcels within the project site minimizes potential wildlife access to and from the site. Existing landscaping is limited to the edges of the parcels, including the front, side, and yards at the two residential buildings 2012 and 2020 Dwight Way and the commercial building at 2001 Blake Street. There are six existing trees on the project site: two at the corner of Milvia Street and Blake Street, one camphor and one pittosporum; one magnolia in the front yard of 2012 Dwight Way; and four surrounding 2020 Dwight Way: one pine, one pittosporum, two evergreen (one *Mytenus* species and one *Taxus* species). In addition, several street trees abut the site, including two Liquidambar trees on Dwight Way and seven camphor (*Cinnamomum camphora*) trees on Blake Street and Milvia Street.

## Impact Analysis

- a. *Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*
- b. *Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?*
- d. *Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?*

As described in the *Setting* section above, the project site is in an urbanized area of Berkeley and is currently developed with one- to two-story commercial buildings, surface parking lots, roadways, and limited perimeter landscaping, including trees. The site does not contain riparian habitat and is not located within a known regional wildlife movement corridor or other sensitive biological area as indicated by the USFWS Critical Habitat portal or CDFW BIOS (USFWS 2020; CDFW 2020). Moreover, according to the Berkeley General Plan EIR, the project site does not contain habitat for species identified as a candidate, sensitive, or special-status species (City of Berkeley 2001c.) Based on the developed nature of the area and lack of native or riparian habitat located on within it, no federal-or state-listed endangered, threatened, rare, or otherwise sensitive flora or fauna are anticipated to be located within the project site.

Existing trees on and around the parcels within the area could contain bird nests and birds that are protected under the Migratory Bird Treaty Act (MBTA). Protected birds include all common songbirds, waterfowl, shorebirds, hawks, owls, eagles, ravens, crows, native doves and pigeons, swifts, martins, swallows, and others, including their body parts (feathers, plumes etc.), nests, and eggs. The proposed project would involve removal of all the existing trees on the site and approximately ten street trees abutting the site. In addition, general demolition and construction activity associated with the project may affect protected nesting birds in existing trees. However, development projects that require a use permit, including the proposed project, are required to comply with the following standard condition of approval that addresses these potential impacts:

Avoid Disturbance of Nesting Birds. Initial site disturbance activities, including vegetation and concrete removal, shall be prohibited during the general avian nesting season (February 1 to August 30), if feasible. If nesting season avoidance is not feasible, the applicant shall retain a qualified biologist to conduct a preconstruction nesting bird survey to determine the presence/absence, location, and activity status of any active nests on or adjacent to the project site. The extent of the survey buffer area surrounding the site shall be established by the qualified biologist to ensure that direct and indirect effects to nesting birds are avoided. To avoid the destruction of active nests and to protect the reproductive success of birds protected by the MBTA and CFGC, nesting bird surveys shall be performed not more than 14 days prior to scheduled vegetation and concrete removal. In the event that active nests are discovered, a suitable buffer (typically a minimum buffer of 50 feet for passerines and a minimum buffer of 250 feet for raptors) shall be established around such active nests and no construction shall be allowed inside the buffer areas until a qualified biologist has determined that the nest is no longer active (e.g., the nestlings have fledged and are no longer reliant on the nest). No ground-disturbing activities shall occur within this buffer until the qualified biologist has confirmed that breeding/nesting is completed and the young have fledged the nest. Nesting bird surveys are not required for construction activities occurring between August 31 and January 31.

Compliance with the above City of Berkeley standard condition of approval would ensure protection of nesting birds and reduce impacts to special status species to a less than significant level. Further analysis of this issue in an EIR is not warranted.

#### **LESS THAN SIGNIFICANT IMPACT**

- c. *Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?*

The National Wetlands Inventory (NWI) was reviewed to determine if wetland and/or non-wetland waters had been previously documented and mapped on or in the vicinity of the project site (U.S. Fish and Wildlife Service 2020). No such features occur on or adjacent to the project site. There is one potential jurisdictional water or wetland that is in the vicinity of the site. Strawberry Creek, a riverine wetland resource, is located approximately 0.6-mile northeast of the site. However, construction and operation of the proposed project would not involve or require the direct removal, filling, hydrological interruption, or other means to the bed, bank, channel, or adjacent upland area of Strawberry Creek. No impact would occur and further analysis in an EIR is not warranted.

#### **NO IMPACT**

- e. *Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?*

As described in the *Description of Project*, construction activities associated with the proposed project would result in the removal of mature trees on and near the project site. General Plan Policy EM-29 requires the City to maintain and enhance street and park trees to improve the environment and provide habitat. On-going implementation of the policy through site-specific review by the Berkeley Department of Planning and Development and Urban Forestry Unit would reduce any potential impact to locally significant trees. The plans for the proposed project would be reviewed twice, during the entitlement (use permit) review and for building permit approvals. Impacts related to General Plan policies would therefore be less than significant.

Under BMC Chapter 6.52, the removal of coast live oak trees is prohibited for any reason, unless such removal is deemed necessary for public safety by the City Manager. Any coast live oak tree with a single stem circumference of 18 inches or more or any multi-stemmed oak with an aggregate circumference of 26 inches or more at a distance of four feet from the ground is protected under this ordinance. While the project would involve removal of trees, none of the existing trees on or near the project site are coast live oak trees protected by the City's tree protection ordinance.

Development of the proposed project would be required to adhere to General Plan policies and to BMC Chapter 6.52. The proposed project does not include components that would conflict with or hinder implementation of the City's tree protection ordinance or other policies or ordinances for protecting biological resources. Impacts would be less than significant. Further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

- f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?*

The project site is not located in an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan (CDFW 2020). Therefore, the project would not conflict with such a plan and no impact would occur. Further analysis in an EIR is not warranted.

**NO IMPACT**

## 4 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	■	□	□	□
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	□	□	■	□
c. Disturb any human remains, including those interred outside of formal cemeteries?	□	□	■	□

### Regulatory Setting

The California Environmental Quality Act (CEQA) requires that a lead agency determine whether a project may have a significant effect on historical resources (Public Resources Code [PRC], Section 21084.1) and tribal cultural resources (PRC Section 21074 [a][1][A]-[B]). A historical resource is a resource listed in, or determined to be eligible for listing, in the California Register of Historical Resources (CRHR), a resource included in a local register of historical resources, or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (State CEQA Guidelines, Section 15064.5[a][1-3]).

A resource is considered historically significant if it:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, if it can be demonstrated that a project would cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that resources cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2[a], [b]).

PRC, Section 21083.2(g) defines a unique archaeological resource as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it:



1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information;
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

## **Impact Analysis**

- a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?*

A Department of Parks and Recreation (DPR) Form 523A was completed for each of the six existing buildings on the project site to evaluate their historical significance (Appendix DPR). The DPR Forms concluded that the building at 2019 Blake Street is eligible for individual listing in the California Register of Historical Resources because of its association with the theater troupe called the Blake Street Hawkeyes. Therefore, the proposed project may result in a substantial adverse change in the significance of a historical resource, and Impacts related to historic resources are potentially significant. Impacts related to historic resources, including impacts related to the other existing buildings that would be demolished or altered as part of the project, will be analyzed further in an EIR.

### **POTENTIALLY SIGNIFICANT IMPACT**

- b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?*

Rincon Consultants requested a search of the California Historical Resources Information System (CHRIS) at the Northwest Information Center (NWIC) located at Sonoma State University on June 25, 2020. The search was performed to identify previously recorded cultural resources, as well as previously conducted cultural resources studies within the project site and a 0.5-mile radius surrounding it. The CHRIS search included a review of available records at the NWIC, as well as the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), the Office of Historic Preservation Built Environment Resources Directory for Alameda County, the California Inventory of Historic Resources, the Archaeological Determinations of Eligibility list, and historic maps.

The NWIC records search identified 38 cultural resources studies conducted within a 0.5-mile radius of the project site, one of which was within the project site (S-051845). Study S-051845 consists of a cultural resources technical report for the Adeline Corridor Specific Plan in the city of Berkeley. The NWIC records search identified no archaeological resources in the project site; however, one previously recorded archaeological resource (P-01-010538) was recorded within a 0.5-mile radius of the project site. The resource consists of a single Native American burial.

Rincon Consultants also conducted a historic map and aerial review of the project site. Sanborn maps depict four single-family homes on the project site as early as 1894 with further development throughout the 20<sup>th</sup> century (Terraphase 2018). Historic aerials indicate the project site has been fully developed over since at least 1939 (Terraphase 2018; NETR 2020). Although the lack of evidence of archaeological resources does not preclude their subsurface existence, the absence of substantial prehistoric or historic period archaeological resources in the immediate vicinity, along

with over a century of disturbance in the project site, suggest the area exhibits a low sensitivity for buried archaeological deposits. However, excavation activities are likely to extend to greater depths than previous disturbances, and the possibility of unanticipated discovery of cultural resources remains.

The project would be subject to the following City of Berkeley standard Conditions of Approval related to the discovery of archaeological resources:

Archaeological Resources (Ongoing throughout demolition, grading, and/or construction).

Pursuant to CEQA Guidelines section 15064.5(f), "provisions for historical or unique archaeological resources accidentally discovered during construction" should be instituted.

Therefore:

- A. In the event that any prehistoric or historic subsurface cultural resources are discovered during ground disturbing activities, all work within 50 feet of the resources shall be halted and the project applicant and/or lead agency shall consult with a qualified archaeologist, historian or paleontologist to assess the significance of the find.
- B. If any find is determined to be significant, representatives of the project proponent and/or lead agency and the qualified professional would meet to determine the appropriate avoidance measures or other appropriate measure, with the ultimate determination to be made by the City of Berkeley. All significant cultural materials recovered shall be subject to scientific analysis, professional museum curation, and/or a report prepared by the qualified professional according to current professional standards.
- C. In considering any suggested measure proposed by the qualified professional, the project applicant shall determine whether avoidance is necessary or feasible in light of factors such as the uniqueness of the find, project design, costs, and other considerations.
- D. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site while mitigation measures for cultural resources is carried out.
- E. If significant materials are recovered, the qualified professional shall prepare a report on the findings for submittal to the Northwest Information Center.

Observance of the above Condition of Approval would ensure that any unanticipated finds during construction would be evaluated and treated by a qualified archaeologist. Therefore, the project would result a less than significant impact, and further analysis in an EIR is unwarranted

**LESS THAN SIGNIFICANT IMPACT**

- c. *Would the project disturb any human remains, including those interred outside of formal cemeteries?*

The discovery of human remains is always a possibility during ground disturbing activities. If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance may occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the county coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a most likely descendant (MLD). The MLD would complete the inspection of the site and provide recommendations for treatment to the landowner

within 48 hours of being granted access. With adherence to existing regulations, impacts to human remains will be less than significant.

In addition, the project would be subject to the following City of Berkeley standard Condition of Approval:

Human Remains (*Ongoing throughout demolition, grading, and/or construction*). In the event that human skeletal remains are uncovered at the project site during ground-disturbing activities, all work shall immediately halt and the Alameda County Coroner shall be contacted to evaluate the remains, and following the procedures and protocols pursuant to Section 15064.5 (e)(1) of the CEQA Guidelines. If the County Coroner determines that the remains are Native American, the City shall contact the California Native American Heritage Commission (NAHC), pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, and all excavation and site preparation activities shall cease within a 50-foot radius of the find until appropriate arrangements are made. If the agencies determine that avoidance is not feasible, then an alternative plan shall be prepared with specific steps and timeframe required to resume construction activities. Monitoring, data recovery, determination of significance and avoidance measures (if applicable) shall be completed expeditiously.

The above condition of approval would ensure that the project would adhere to applicable regulations related to human remains. With adherence to existing regulations, impacts to human remains would be less than significant and further analysis in an EIR is unwarranted.

**LESS THAN SIGNIFICANT IMPACT**

## 5 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Electricity Setting

In 2019, California's in-state electricity generation totaled 200,475 megawatts (California Energy Commission [CEC] 2020b). Primary fuel sources for the state's electricity generation in 2019 included natural gas, hydroelectric, solar photovoltaic, wind, nuclear, geothermal, biomass, and solar thermal. According to the 2019 Integrated Energy Policy Report, California's electric grid relies increasingly on clean sources of energy such as solar, wind, geothermal, hydroelectricity, and biomass. In addition, by 2025 the use of electricity sourced from out-of-state coal generation will be eliminated. As this transition advances, the grid is also expanding to serve additional loads produced by building and vehicle electrification among other factors. California produces more renewable energy than any other state in the United States with 23,313 megawatts of installed renewable capacity (CEC 2020c; United States Energy Information Administration [U.S. EIA] 2020b).

#### *East Bay Community Energy*

East Bay Community Energy (EBCE) supplies electricity to the Southside Area using transmission infrastructure operated and maintained by Pacific Gas and Electric (PG&E). EBCE is a community-governed, local power supplier that provides cleaner electricity to Alameda County residents and businesses. As of 2018, EBCE's energy intensity factor for its base plan (Bright Choice) consists of 41 percent eligible renewable energy resources (EBCE 2020b). PG&E is one of the nation's largest electric and gas utility companies, and it maintains 106,681 circuit miles of electric distribution lines and 18,466 circuit miles of interconnected transmission lines (PG&E 2020). According to PG&E's 2018 Integrated Resource Plan, PG&E anticipates meeting a 2030 energy load demand of between 36,922 gigawatt-hours and 37,370 gigawatt-hours (PG&E 2018).

As shown in Table 6, Alameda County consumed approximately 10,417 gigawatt-hours in 2018, which was approximately 13 percent of electricity consumption by PG&E customers and approximately four percent of statewide electricity consumption (CEC 2019b).

**Table 6 2018 Electricity Consumption**

Energy Type	Alameda County (GWh)	PG&E (GWh)	California (GWh)	Proportion of PG&E Consumption	Proportion of Statewide Consumption <sup>1</sup>
Electricity	10,417	80,369	284,436	13.0%	3.7%

GWH = gigawatt-hours

<sup>1</sup> For reference, the population of Alameda County (1,670,834 persons) is approximately 4.2 percent of the population of California (39,782,870 persons) (California Department of Finance 2020).

Source: CEC 2019b

## Natural Gas Setting

California's net natural gas production for 2018 was 180.6 billion cubic feet, or approximately 187,282 billion British thermal units (Btu; California Department of Conservation Division of Oil, Gas, and Geothermal Resources 2019). The state relies on out-of-state natural gas imports for nearly 90 percent of its supply (CEC 2020d). The CEC estimates that approximately 45 percent of the natural gas burned across the state is used for electricity generation, and much of the remainder is consumed in the residential (21 percent), industrial (25 percent), and commercial (9 percent) sectors. Building and appliance energy efficiency standards account for up to 39 percent in natural gas demand savings between 1975 and 2010 (CEC 2020d).

As shown in Table 7, Alameda County consumed approximately 377 million US therms in 2018, which was approximately eight percent of natural gas consumption by PG&E customers and approximately three percent of statewide natural gas consumption (CEC 2019b).

**Table 7 2018 Natural Gas Consumption**

Energy Type	Alameda County (millions of US therms)	PG&E (millions of US therms)	California (millions of US therms)	Proportion of PG&E Consumption	Proportion of Statewide Consumption <sup>1</sup>
Natural Gas	377	4,794	12,666	7.9%	3.0%

<sup>1</sup> For reference, the population of Alameda County (1,670,834 persons) is approximately 4.2 percent of the population of California (39,782,870 persons) (California Department of Finance 2020).

Source: CEC 2019b

## City of Berkeley

Berkeley Municipal Code Chapter 12.80 prohibits the use of natural gas infrastructure in all new construction. The two proposed new multi-family buildings at Parcel 2 would comply with this requirement. The existing buildings at 2012 and 2020 Dwight Way proposed to be relocated within Parcel 1 and renovated would continue to be supplied by natural gas.

## Petroleum Setting

California is one of the top producers of petroleum in the nation with drilling operations occurring throughout the state but concentrated primarily in Kern and Los Angeles counties. A network of crude oil pipelines connects production areas to oil refineries in the Los Angeles area, the San Francisco Bay area, and the Central Valley. California oil refineries also process Alaskan and foreign crude oil received at ports in Los Angeles, Long Beach, and the San Francisco Bay area (CEC 2020a).

According to the United States Energy Information Administration, California's field production of crude oil totaled 161.5 million barrels in 2019 (U.S. EIA 2020a).

As shown in Table 8, Alameda County consumed an estimated 569 million gallons of gasoline and 62 million gallons of diesel fuel in 2018, which was approximately four percent of statewide gasoline consumption and approximately four percent of statewide diesel fuel consumption (CEC 2019b).

**Table 8 2018 Annual Gasoline and Diesel Consumption**

Fuel Type	Alameda County (gallons)	California (gallons)	Proportion of Statewide Consumption <sup>1</sup>
Gasoline	569,000,000	15,471,000,000	3.7%
Diesel	62,000,000	1,777,000,000	3.5%

<sup>1</sup> For reference, the population of Alameda County (1,670,834 persons) is approximately 4.2 percent of the population of California (39,782,870 persons) (California Department of Finance 2020).

Source: CEC 2019a

## Methodology

Energy consumption is analyzed herein in terms of construction and operational energy. Construction energy demand accounts for anticipated energy consumption during project construction, such as fuel consumed by construction equipment and construction workers' vehicles traveling to and from the project site. Operational energy demand accounts for the anticipated energy consumption during project operation, such as fuel consumed by cars, trucks, and public transit; natural gas consumed for on-site power generation, heating building space, and cooking needs; and electricity consumed for building power needs, including, but not limited to lighting, water conveyance, and air conditioning.

The CalEEMod outputs for the air quality and GHG modeling (Appendix AIR) and the Vehicle Miles Traveled (VMT) calculations in the traffic study completed for the project (Appendix TIA) were used to estimate energy consumption associated with the remainder of the proposed project. The CalEEMod results provide the average travel distance and trip numbers during construction, and the vehicle fleet mix during operation. The CalEEMod results also provide the estimated gross electricity and natural gas consumption by land use during operation of the proposed project.

## Impact Analysis

- a. *Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?*

## Construction Energy Demand

During project construction, energy would be consumed in the form of petroleum-based fuels used to power off-road construction vehicles and equipment on the project site, construction worker travel to and from the project site, and vehicles used to deliver materials to the site. The proposed project would require demolition; site preparation and grading, including hauling soil on-site; pavement and asphalt installation; building construction; architectural coating; and landscaping and hardscaping.

As shown in Table 9 below, construction of the project would require approximately 29,298 gallons of gasoline and 98,728 gallons of diesel fuel. Energy use during construction would be temporary, and construction equipment used would be typical of similar-sized construction projects in the region. In addition, construction contractors would be required to comply with the provisions of California Code of Regulations Title 13 Sections 2449 and 2485, which prohibit diesel-fueled commercial motor vehicles and off-road diesel vehicles from idling for more than five minutes and would minimize unnecessary fuel consumption. Construction equipment would be subject to the U.S. EPA Construction Equipment Fuel Efficiency Standard, which would also minimize inefficient, wasteful, or unnecessary fuel consumption.

In addition, per applicable regulatory requirements such as 2019 CALGreen and BMC Chapter 19.37, the project would comply with construction waste management practices to divert a minimum of 65 percent of construction and demolition debris and 100 percent of concrete, asphalt, and land-clearing debris. These practices would result in efficient use of energy necessary to construct the project. Furthermore, in the interest of cost-efficiency, construction contractors would not utilize fuel in a manner that is wasteful or unnecessary. Therefore, project construction would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy, and impacts would be less than significant. Further analysis in an EIR is unwarranted.

**Table 9 Proposed Project Construction Energy Usage**

Source	Fuel Consumption (Gallons)	
	Gasoline	Diesel
Construction Equipment & Hauling Trips	–	98,728
Construction Worker Vehicle Trips	29,298	–

See Appendix AIR for CalEEMod default values for fleet mix and average distance of travel, and Appendix ENG for energy calculation sheets.

## Operational Energy Demand

Operation of the proposed project would require energy use in the form of electricity, natural gas, and gasoline consumption. Natural gas and electricity would be used for heating and cooling systems, lighting, appliances, water use, and the overall operation of the project. As described in the *Natural Gas Setting* section above, operation of the two new buildings would be all-electric, consistent with the requirements of BMC Chapter 12.80. The renovated buildings at 2012 and 2020 Dwight Way would continue to use natural gas. Gasoline consumption would be attributed to vehicular travel from residents and visitors traveling to and from the project site. Table 10 below shows the project's estimated total annual gasoline and diesel fuel consumption, as well as electricity and natural gas use.

**Table 10 Proposed Project Operational Energy Usage**

Source	Energy Consumption	
Vehicle Trips		
Gasoline	48,315 gallons	5,304 MMBtu <sup>1</sup>
Diesel	10,806 gallons	1,377 MMBtu <sup>1</sup>
Built Environment		
Electricity	0.8 GWh	2,730 MMBtu
Natural Gas Usage	1,532 therms	143 MMBtu
Source: Appendix ENG		

As shown in Table 10, project operation would consume approximately 0.8 GWh of electricity and 1,532 therms of natural gas per year. The project would comply with standards set in California Building Code (CBC) Title 24, which would minimize the wasteful, inefficient, or unnecessary consumption of energy resources during operation. CALGreen (as codified in CCR Title 24, Part 11) and BMC Chapter 19.37 require implementation of energy-efficient light fixtures and building materials into the design of new construction projects. Furthermore, the 2019 Building Energy Efficiency Standards (CBC Title 24, Part 6) requires newly constructed buildings to meet energy performance standards set by the CEC. These standards are specifically crafted for new buildings to achieve energy efficient performance. The standards are updated every three years, and each iteration increases energy efficiency standards. For example, according to the CEC, under 2019 Title 24 standards residential buildings will use about seven percent less energy than under 2016 Title 24 standards due mainly to lighting upgrades (CEC 2018c). Furthermore, the project would continue to reduce its use of nonrenewable energy resources as the percentage of electricity generated by renewable resources provided by PG&E continues to increase to comply with state requirements through Senate Bill 100, which requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045.

In addition, vehicle trips associated with the project would require approximately 48,315 gallons of gasoline and 10,806 gallons of diesel fuel annually. Furthermore, the proposed project would increase housing density in close proximity to existing commercial uses, which would facilitate the use of transit and alternative transportation modes such as walking and biking. In addition, the site is within walking distance of several bus stops for AC Transit, including stops for routes 6, 18, 36, 51B, and the Downtown Berkeley station for the Bay Area Rapid Transit. As a result, as discussed in Section 17, *Transportation*, daily VMT associated with the proposed project would be approximately 7.9 VMT per capita, which would be approximately 47 percent lower than the Bay Area regionwide average of 15.0 VMT per capita. These factors would minimize the potential of the project to result in the wasteful, inefficient, or unnecessary consumption of vehicle fuels. Therefore, project operation would not result in potentially significant environmental effects due to the wasteful, inefficient, or unnecessary consumption of energy. Impacts would be less than significant, and further analysis in an EIR is unwarranted.

#### **LESS THAN SIGNIFICANT IMPACT**



- b. *Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?*

The City's CAP contains recommended goals intended to increase energy efficiency and expand the use of renewable energy. As discussed under Impact GHG-2 in Section 8, *Greenhouse Gas Emissions*, the proposed project would be consistent with the recommended goals of the City's CAP related to energy efficiency and renewable energy, including Sustainable Transportation and Land Use Goal 8 and Building Energy Use Goals 1 and 4. Table 11 summarizes the project's consistency with the applicable policies of the City's General Plan related to energy efficiency and renewable energy. As shown therein, the proposed project would be consistent with applicable General Plan policies. Therefore, the project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, and impacts would be less than significant. Further analysis in an EIR is unwarranted.

**Table 11 Project Consistency with Applicable General Plan Measures**

Policies	Project Consistency
<b>Transportation Element</b>	
<b>Policy T-19 Air Quality Impacts.</b> Continue to encourage innovative technologies and programs such as clean-fuel, electric, and low-emission cars that reduce the air quality impacts of the automobile.	<b>Consistent:</b> The proposed project would be subject to the requirements of the most recent iteration of CALGreen and BMC Chapter 19.37, which includes provisions for electric vehicle charging infrastructure. As described in the <i>Description of the Project</i> , the project would be required to provide at least 19 EV charging parking spaces and at least 74 parking spaces that are equipped to function as EV spaces in the future. In addition, as described in the <i>Description of Project</i> Section, the project would also include additional green building features, including built-in composting and recycling centers, efficient clothes washing and drying machines, and high efficiency lighting.
<b>Environmental Management Element</b>	
<b>Policy EM-5 "Green" Buildings.</b> Promote and encourage compliance with "green" building standards.	<b>Consistent:</b> The project would be required to be constructed in accordance with the latest iteration of CALGreen, the California Building Energy Efficiency Standards, and the Berkeley Green Code (BMC Chapter 19.37), which include green building practices. In addition, new construction on the site would be fully electric per the requirements of Berkeley Municipal Code Section 12.80, which would reduce consumption of nonrenewable energy resources.
<b>Policy EM-8 Building Reuse and Construction Waste.</b> Encourage rehabilitation and reuse of buildings whenever appropriate and feasible in order to reduce waste, conserve resources and energy, and reduce construction costs.	<b>Consistent:</b> The proposed project would be required to divert at least 65 percent of construction and demolition debris per the requirements of CALGreen and BMC Chapter 19.37.
<b>Policy EM-35 Energy Efficient Design.</b> Promote high-efficiency design and technologies that provide cost-effective methods to conserve energy and use renewable energy sources.	<b>Consistent:</b> The project would be required to be constructed in accordance with the latest iteration of CALGreen, the California Building Energy Efficiency Standards, BMC Chapter 19.37, which include requirements for the use of energy-efficient design and technologies as well as provisions for incorporating renewable energy resources into building design. The project would also include additional green building

Policies	Project Consistency
	features, including built-in composting and recycling centers, efficient clothes washing and drying machines, and high efficiency lighting. Finally, new construction within the project site would be fully electric per the requirements of Berkeley Municipal Code Section 12.80, which would also reduce consumption of nonrenewable energy resources.
<b>Policy EM-41 Fossil Fuel.</b> Encourage and support efforts to reduce use of fossil fuel and other finite, nonrenewable resources.	<b>Consistent:</b> The project would increase housing density in an area which currently includes a mix of residential and commercial land uses in proximity to the downtown area. The site is within walking distance of several bus stops served by Alameda County Transit. In addition, the Downtown Berkeley BART station for is located approximately 0.5 mile (walking distance) of the site. Therefore, the project would provide access by proximity through locating housing close to transportation and commercial services, thereby supporting efforts to reduce the use of fossil fuels by motor vehicles. In addition, new construction would be fully electric per the requirements of Berkeley Municipal Code Section 12.80, which would also reduce consumption of nonrenewable energy resources.
<b>Housing Element</b>	
<b>Policy H-30 Energy Efficiency and Waste Reduction.</b> Implement provisions of Berkeley's Climate Action Plan to improve building comfort and safety, reduce energy costs, provide quality housing, and reduce Greenhouse Gas Emissions.	<b>Consistent:</b> As discussed in Section 8, <i>Greenhouse Gas Emissions</i> , the proposed project would be consistent with the recommended goals of the City's CAP. The project would also include green building features beyond those required by CALGreen, including built-in composting and recycling centers, efficient clothes washing and drying machines, and high efficiency lighting.
<b>Urban Design Element</b>	
<b>Policy UD-33 Sustainable Design.</b> Promote environmentally sensitive and sustainable design in new buildings.	<b>Consistent:</b> The project would be required to be constructed in accordance with the latest iteration of CALGreen, the California Building Energy Efficiency Standards, and BMC Chapter 19.37, which include environmentally sensitive and sustainable design practices. In addition, new construction would be fully electric per the requirements of Berkeley Municipal Code Section 12.80, which would reduce consumption of nonrenewable energy resources.
Source: City of Berkeley 2003	

## LESS THAN SIGNIFICANT IMPACT

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## 6 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4. Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Much of the analysis in this section is based on the information in the Geotechnical Feasibility Study prepared for the proposed project by Romig Engineers in December 2018. The report is included as Appendix GEO. The purpose of the investigation was to determine the nature of the surface and subsurface soil conditions at the project site. The report presents preliminary conclusions regarding soil conditions and recommendations for earthwork and foundation design to adapt the proposed development to the existing soil conditions. The report also notes that a site-specific geotechnical exploration will be performed for a design-level geotechnical report.

## **Geologic Setting**

Berkeley is situated within the Coast Ranges geomorphic province of California (California Geological Survey 2003). A geomorphic province is a region of unique topography and geology that is readily distinguished from other regions based on its landforms and geologic history (Norris and Webb 1990). The Coast Ranges extend about 600 miles from the Oregon border south to the Santa Ynez River in Santa Barbara County. The Coast Ranges are composed of a complex assemblage of geologic units, including Mesozoic metasedimentary and metavolcanic rock of the Franciscan Complex, marine and nonmarine sedimentary rock of the Cretaceous Great Valley Complex, and Cenozoic marine and nonmarine shale, sandstone, and conglomerate (Norris and Webb 1990).

Specifically, Berkeley is located on the East Bay Plain (the Plain), a flat area that extends 50 miles from Richmond in the north to San Jose in the south. The Plain is about three miles wide in the Berkeley area. At its eastern edge, the plain transitions into hills, rising to approximately 1,683 feet at Barberry Peak, the highest point in Berkeley's Claremont Hills neighborhood. On its western edge, the Plain slopes down to San Francisco Bay, the largest estuary on the California coast (City of Berkeley 2001b; maplogger.com 2018).

Berkeley is located in the United States Geological Survey's (USGS) Richmond and Oakland West Quadrangle 7.5-minute topographic map areas. The area is typified by low topographic relief, with gentle slopes to the west in the direction of San Francisco Bay. By contrast, the Berkeley Hills that lie directly east of Berkeley have more pronounced topographic relief, with elevations that exceed 1,000 feet above mean sea level (City of Berkeley 2001b).

As mapped by the U.S. Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS), the project site features Tierra complex slopes that have from two to five percent slopes. Soils in the Tierra complex present a high rate of surface runoff and high shrink-swell potential (USDA 2017, USDA 1981).

## **Seismic Setting**

Similar to much of California, the project site is located in a seismically active region. The USGS defines active faults as those that have had surface displacement within the Holocene period (about the last 11,000 years). Surface displacement can be recognized by the existence of cliffs in alluvium, terraces, offset stream courses, fault troughs and saddles, the alignment of depressions, sag ponds, and the existence of steep mountain fronts. Potentially active faults are those that have had surface displacement during the last 1.6 million years, and inactive faults have not had surface displacement within that period. Several faults are near the project site, including those listed below:

- **The San Andreas Fault**, the most likely source of a major earthquake in California, is located approximately 15 miles west of Berkeley. The San Andreas Fault is the primary surface boundary between the Pacific and the North American plates. There have been numerous historic earthquakes along the San Andreas Fault, and it generally poses the greatest earthquake risk to

California. In general, the San Andreas Fault is likely capable of producing a Maximum Credible Earthquake of 8.0.

- **The Hayward Fault**, one of ten major faults that make up the San Andreas Fault Zone, runs east of the along the eastern portion of Berkeley and links with the Rodgers Creek Fault to the north. Although the last major earthquake generated by the Hayward Fault was in 1868, pressure is slowly building again and will begin to overcome the friction and other forces that cause the fault zone to stick. According to a study of earthquake probabilities by the USGS, the fault system that includes the Hayward and Rodgers Creek faults has a 31 percent probability of generating an earthquake with a magnitude greater than or equal to 6.7 on the Mercalli Richter Scale in the next 20 years (City of Berkeley 2014). The Hayward Fault would likely cause extensive damage throughout Berkeley area due to its close proximity to urban communities and infrastructure. The Hayward Fault and surrounding area is a designated Alquist-Priolo Zone. The project site is approximately one mile west of the Hayward Fault.
- **Other active faults** near the site include the Wildcat and the Miller Creek faults and several potentially active faults and unnamed secondary faults adjacent to these. There are few or no studies pertaining to these additional secondary faults, and it is unknown whether they may or may not experience secondary ground rupture during a large earthquake.

#### *Liquefaction and Seismically Induced Settlement*

Liquefaction is defined as the sudden loss of soil strength due to a rapid increase in soil pore water pressure resulting from seismic ground shaking. Liquefaction potential is dependent on such factors as soil type, depth to ground water, degree of seismic shaking, and the relative density of the soil. When liquefaction of the soil occurs, buildings and other objects on the ground surface may tilt or sink, and lightweight buried structures (such as pipelines) may float toward the ground surface. Liquefied soil may be unable to support its own weight or that of structures, which could result in loss of foundation bearing or differential settlement. Liquefaction may also result in cracks in the ground surface followed by the emergence of a sand-water mixture. Earthquake hazard maps produced by ABAG indicate that a large Hayward Fault quake would trigger violent shaking throughout Berkeley and a high risk of liquefaction across the city, including at the project site (City of Berkeley 2001a). The project site is in an area identified as having low susceptibility to liquefaction (City of Berkeley 2014).

Seismically induced settlement occurs in loose to medium dense unconsolidated soil above groundwater. These soils compress (settle) when subject to seismic shaking. The settlement can be exacerbated by increased loading, such as from the construction of buildings. Settlement can also result solely from human activities including improperly placed artificial fill, and structures built on soils or bedrock materials with differential settlement rates. According to the Geotechnical Feasibility Evaluation, some seismic-related settlement is possible at the project site (Appendix GEO).

#### *Landslides*

Landslides result when the driving forces that act on a slope (i.e., the weight of the slope material, and the weight of objects placed on it) are greater than the slope's natural resisting forces (i.e., the shear strength of the slope material). Slope instability may result from natural processes, such as the erosion of the toe of a slope by a stream, or by ground shaking caused by an earthquake. Slopes can also be modified artificially by grading, or by the addition of water or structures to a slope.

Development that occurs on a slope can substantially increase the frequency and extent of potential slope stability hazards.

Areas susceptible to landslides are typically characterized by steep, unstable slopes in weak soil/bedrock units which have a record of previous slope failure. According to the Disaster Preparedness and Safety Element of the City of Berkeley General Plan (City of Berkeley 2001a), landslide risk is low throughout the majority of Berkeley, including the area where the project site is located.

### *Expansive Soils*

Expansive soils can change dramatically in volume depending on moisture content. When wet, these soils can expand; conversely, when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomenon include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can develop wide cracks in the dry season, and changes in soil volume have the potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils. The geotechnical investigation identifies the presence of expansive soils as a potential hazard at the site.

### *Erosion*

Erosion is the wearing away of the soil mantle by running water, wind or geologic forces. It is a naturally occurring phenomenon and ordinarily is not hazardous. However, excessive erosion can contribute to landslides, siltation of streams, undermining of foundations, and ultimately the loss of structures. Removal of vegetation tends to heighten erosion hazards. The City enforces grading and erosion control ordinances to reduce these hazards.

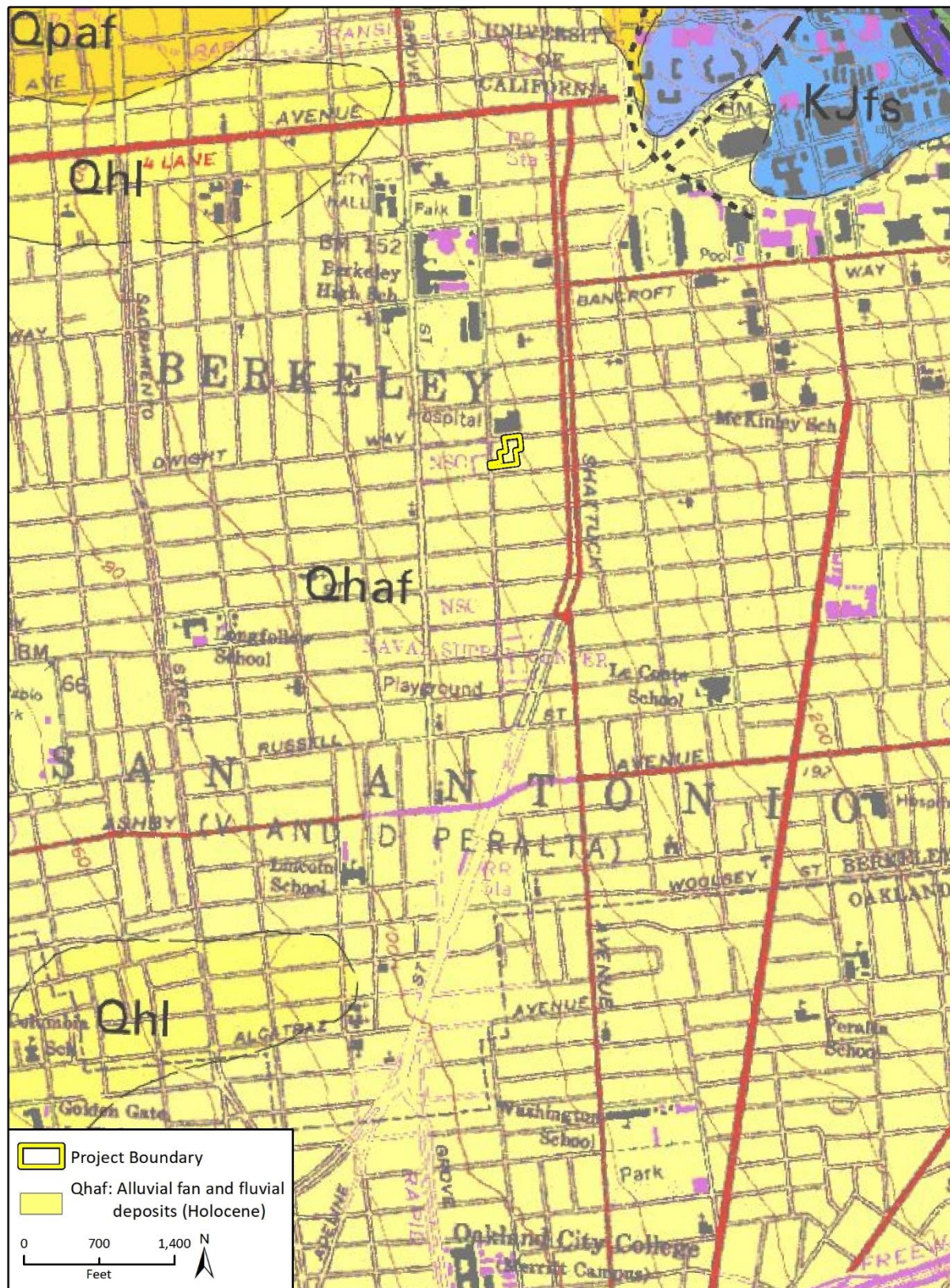
## **Paleontological Setting**

The project site is underlain by one mapped geologic unit: late to middle Holocene alluvial fan and fluvial deposits (Qhaf) (Graymer 2000). Holocene-aged alluvial fan and fluvial deposits consist of medium dense to dense, gravelly sand or sandy gravel of valleys and stream channels. Figure 8 shows the soil types surrounding the project site.

The potential for the project to result in significant impacts to paleontological resources was evaluated based on its potential to disturb paleontologically sensitive geologic units during construction. The analysis involved a review of pertinent geologic maps and geologic literature, and a paleontological locality search to identify any known fossil localities within the Southside Area, or from geologic units mapped in the Southside Area. Fossil collections records from the Paleobiology Database and University of California Museum of Paleontology (UCMP) online database were reviewed to identify known fossil localities in Alameda County (Paleobiology 2020; UCMP 2020). Following the geologic map review, literature review, and UCMP database search, a paleontological sensitivity was assigned to the geologic units mapped within the Southside Area based on Society of Vertebrate Paleontology (SVP) guidelines (SVP 2010). The SVP has developed a system for assessing paleontological sensitivity and describes sedimentary rock units as having high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources (SVP 2010). This system is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present.



Figure 8 Geologic Units Mapped within the Project Site



Imagery provided by R.W. Graymer, "Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California," 2000.



Late to middle Holocene deposits (Qhaf) are too young (i.e., less than 5,000 years old) to preserve paleontological resources at or near the surface, and are considered to have a low paleontological sensitivity at the surface as defined by SVP (2010) standards; however, late to middle Holocene deposits may grade downward into more fine-grained deposits of early Holocene to late Pleistocene age that could preserve fossil remains at shallow or unknown depths. The depths at which these units become old enough to contain fossils is highly variable, and depend on the location of the site within a geologic basin (e.g., near or far from basin margins), the sedimentary relationship of the surface units underlying geologic units, and the erosional history of the region. The project is located near the base of the hills where older geologic units are exposed. Pleistocene-aged alluvium is mapped at the surface less than 0.25 mile from the project site, indicating that the contact between younger Holocene aged units and underlying Pleistocene-aged units is likely very near the surface (i.e., within three feet of the surface). Early Holocene to late Pleistocene alluvial sediments have a well-documented record of abundant and diverse vertebrate fauna throughout California. Localities have produced fossil specimens of mammoth (*Mammuthus columbi*), horse (*Equus*), camel (*Camelops*), and bison (*Bison*), as well as various birds, rodents, and reptiles (Jefferson 1985, 2010; Paleobiology Database 2020; UCMP 2020). Therefore, areas mapped as Late to middle Holocene deposits (Qhaf) alluvial deposits are assigned a high paleontological sensitivity at depths greater than three feet (SVP 2020).

## **Impact Analysis**

- a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?*

According to the Geotechnical Feasibility Study, the project site is not located within an identified earthquake fault zone as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map (Appendix GEO). No known fault lines are located on the site. The closest active fault is the Hayward Fault, which is located approximately one mile east of the site. Thus, the likelihood of surface rupture occurring from active faulting at the site is remote. No impact would occur and further analysis in an EIR is not warranted.

### **NO IMPACT**

- a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?*

As with any site in the Bay Area region, the project site is susceptible to strong seismic ground shaking in the event of a major earthquake. As described in the *Seismic Setting* section above, nearby active faults include the San Andreas Fault, the Concord Fault, and the Hayward. These faults are capable of producing strong seismic ground shaking within and near the project site.

Several applicable regulations and policies would reduce hazards related to seismic ground shaking. The proposed project would involve replacement of older buildings subject to seismic damage with new structures built to current seismic standards that could better withstand the adverse effects of strong ground shaking. The project would be required to conform to the California Building Code (CBC) (as amended at the time of permit approval) as required by law. The City of Berkeley has adopted the CBC by reference pursuant to Title 19, Chapter 28 of the BMC. The CBC includes requirements for foundation and structural design to resist seismic hazards. In addition, the CBC

outlines specific instances of when geotechnical investigations are required based on soil conditions and proposed construction methods, including for any kind of multi-family development such as the proposed project. Moreover, such investigations are required to include, among other information, recommendations for foundation type and design criteria to address identified geological constraints.

As noted above, a Geotechnical Feasibility Study was prepared for the proposed project; the study notes that a final design-level geotechnical report, including a more detailed site-specific exploration, will be required to fully evaluate the proposed project and recommended design measures to mitigate geologic hazards. However, the study concludes that from a geotechnical engineering viewpoint, the site is suitable for the proposed seven-story building. Moreover, the study recommends that the basement portion of the new building will likely need to be supported on a structural mat foundation, and the at-grade portions will likely need to be supported on a pier and grade beam foundation. In addition, the basement mat will need to be designed to resist hydrostatic uplift pressure from the projected high ground water level. Finally, the study recommends that if the weight of the building is not sufficient to resist the uplift pressure, some form of hold down anchors, such as grouted micro piles, may be needed to prevent buoyancy of the structure.

The proposed project would be reviewed by the Building and Safety Division during the normal plan review process to confirm that the necessary geotechnical investigations are completed. The City would also ensure that the project would be designed and constructed consistent with the current City of Berkeley Building Codes and with the findings and recommendations of the final site-specific geotechnical report, including those identified in the Geotechnical Feasibility Study, to effectively minimize or avoid potential hazards associated with redevelopment and/or new building construction. Therefore, proper engineering, including compliance with the City of Berkeley Building Codes, would minimize the risk to life and property associated with potential seismic activity in the area. Impacts related to seismic shaking would be less than significant, and further analysis in an EIR is not required.

#### **LESS THAN SIGNIFICANT IMPACT**

- a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?*
- c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?*

According to the Geotechnical Feasibility Evaluation prepared for the proposed project, the site is not located within a liquefaction hazard zone, and the likelihood of significant liquefaction occurring at the project site is low (Appendix GEO). However, the report notes that some seismic-related settlement is possible and that a design-level geotechnical investigation will be required to estimate the magnitude of such settlement. Therefore, potential development under the proposed project could directly or indirectly cause the risk of loss, injury or death related to liquefaction and unstable soils.

As described above under question (a.2), the project would be subject to requirements and regulations that would reduce impacts related to settlement and liquefaction. As required by the CBC requirements as adopted in the BMC, site-specific geotechnical investigations would be required for the proposed project to identify the degree of potential hazards, design parameters for the project based on the hazard, and describe appropriate design measures to address hazards. For

example, to address potential impacts related to settlement, the Geotechnical Feasibility Study concludes that the basement portion of the new seven-story will likely need to be supported on a structural mat foundation, and the at-grade portions will likely need to be supported on a pier and grade beam foundation (Appendix GEO). Despite identified geotechnical constraints, the study concludes that the site is suitable for the proposed project from a geotechnical engineering viewpoint. During review of the building permit application for the project, the City would ensure that the necessary geotechnical investigations are completed and that the project design incorporates recommendations to mitigate potential hazards, including those related to seismic-related settlement as identified in the Geotechnical Feasibility Study. Therefore, compliance with the CBC and the BMC would ensure that potential impacts would be less than significant. Further analysis in an EIR is not warranted.

#### **LESS THAN SIGNIFICANT IMPACT**

*a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?*

As noted above in the *Seismic Setting* Section above, landslides are typically a hazard on or near slopes or hillside areas, rather than generally level areas like the project site and the surrounding area. According to the Geotechnical Feasibility Report prepared for the project, the site is not located in an earthquake-induced landslide hazard zone (Appendix GEO). The area is generally flat and is not surrounded by hillsides. Impacts would be less than significant and further analysis in an EIR is not warranted.

#### **LESS THAN SIGNIFICANT IMPACT**

*b. Would the project result in substantial soil erosion or the loss of topsoil?*

Project construction, particularly demolition, grading, and site preparation, could result in erosion and loss of topsoil from the project site. However, various local requirements would reduce impacts related to erosion and loss of topsoil. BMC Chapter 21.40 requires that proposed projects comply with grading, erosion, and sediment control regulations on file in the Public Works Department, and BMC Chapter 17.20 requires that federal, state, and local erosion and sediment control Best Management Practices (BMPs) be implemented to minimize erosion during construction. Construction BMPs would include scheduling inlet protection, silt fencing, fiber rolls, stabilized construction entrances, stockpile management, solid waste management, and concrete waste management.

In addition, the project would be required to comply with the following standard Condition of Approval, which is intended to limit impacts related to erosion:

Public Works. Prior to any excavation, grading, clearing, or other activities involving soil disturbance during the rainy season the applicant shall obtain approval of an erosion prevention plan by the Building and Safety Division and the Public Works Department. The applicant shall be responsible for following these and any other measures required by the Building and Safety Division and the Public Works Department.

Compliance with BMC requirements and the above condition of approval would reduce impacts from soil erosion and the loss of topsoil to less than significant levels, and further analysis in an EIR is not warranted.

#### **LESS THAN SIGNIFICANT IMPACT**

- d. *Would the project be located on expansive soil, as defined in Table 1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?*

Expansive soils are characterized by high clay content which expands when saturated with water and shrinks when dry, potentially threatening the integrity of buildings and infrastructure foundations. Expansive soils are described as having high shrink-swell potential. The Geotechnical Feasibility Evaluation prepared for the site concludes that a primary geotechnical concern at the site is the probable presence of moderately to highly expansive surface soil. However, the Geotechnical Feasibility Study concludes that the project site is suitable for the project from a geotechnical engineering viewpoint. (Appendix GEO).

As described under question (a.2), the City of Berkeley Building Codes would require that a final geotechnical investigation be prepared for the proposed project. The final report would contain recommendations for ground preparation and earthwork specific to the site, including the recommendations included in the Geotechnical Feasibility Study, such as a mat foundation for proposed basements, pier and grade beam foundations for at-grade portions, and anchors to hold down the building. The recommendations in the final report would then become an integral part of the construction design. Moreover, such a report is required to be approved by the City to ensure that recommended action included in the report would prevent structural damage. Therefore, compliance with existing state and local laws and regulations would ensure that impacts associated with expansive soil would be minimized by requiring the submittal and review of detailed soils and/or geologic reports prior to construction. Impacts associated with expansive soils would be less than significant. Further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

- e. *Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

The project site would be served by the municipal sewer system and would not require the installation of an on-site septic tank or alternate wastewater treatment systems. Therefore, no impacts from septic systems or alternative wastewater disposal systems would occur and further analysis in an EIR is not warranted.

**NO IMPACT**

- f. *Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

Construction of the project would involve excavation for the subterranean parking garage to a maximum depth of approximately 24 feet over a land area of approximately 169 feet by 189 feet. As described in the *Paleontological Setting* Section above, because the site is underlain by geologic units assigned a high paleontological sensitivity at depths of three feet and deeper, paleontological resources may be encountered during ground-disturbing activities associated with project construction (e.g., grading, excavation, or other ground disturbing construction activity). Because previous ground disturbance on the site has been limited to excavation for building foundations, construction activities from the project may result in the destruction, damage, or loss of undiscovered scientifically important paleontological resources; this would be a potentially significant impact.

The implementation of Mitigation Measure GEO-1 would reduce impacts to paleontological resources to a less than significant level by including an implementation program requiring paleontological resource monitoring to avoid or reduce impacts to such resources.

## **Mitigation Measures**

### *GEO-1 Paleontological Resources*

1. **Qualified Paleontologist.** The project applicant shall retain a Qualified Paleontologist prior to excavations or ground disturbance that will exceed three feet in depth. The Qualified Paleontologist shall direct all mitigation measures related to paleontological resources. A qualified professional paleontologist is defined by the SVP standards as an individual preferably with an M.S. or Ph.D. in paleontology or geology who is experienced with paleontological procedures and techniques, who is knowledgeable in the geology of California, and who has worked as a paleontological mitigation project supervisor for a least two years (SVP 2010).
2. **Paleontological Worker Environmental Awareness Program (WEAP).** Prior to ground disturbance, the applicant shall incorporate information on paleontological resources into the Project's Worker Environmental Awareness Training (WEAP) materials, or a stand-alone Paleontological Resources WEAP shall be submitted to the Department of Planning and Development at the City of Berkeley. The Qualified Paleontologist or his or her designee shall conduct training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. The Paleontological WEAP training shall be fulfilled simultaneously with the overall WEAP training, or at the first preconstruction meeting at which a Qualified Paleontologist attends prior to ground disturbance. Printed literature (handouts) shall accompany the initial training. Following the initial WEAP training, all new workers and contractors must be trained prior to conducting ground disturbance work.
3. **Paleontological Monitoring.** The extent of required paleontological monitoring for the project shall be determined by the Qualified Paleontologist based on an evaluation of the previously undisturbed geologic units exposed during ground disturbing activity. The Qualified Paleontologist shall conduct an initial spot check and evaluation of geologic conditions for ground disturbing activity for excavations between 5-10 feet below ground surface (BGS). The evaluation shall be based on field evidence including lithology of geologic units and results of microscreening or other inspections for fossil resources. If the paleontologist determines that geologic units exposed between 5-10 feet BGS have high paleontological sensitivity, then full-time monitoring shall be conducted for the duration of ground disturbing activity. If sediments between 5-10 feet BGS are determined to not be paleontological sensitive, spot checks should be conducted again for ground disturbance between 10-15 feet BGS and again for ground disturbance between 15-20 feet BGS, and again to the full depth of ground disturbance. If spot checks indicate low or no paleontological sensitivity, or if full time monitoring results in no fossil discoveries once the full depth of ground disturbance has been reached, paleontological monitoring can be discontinued for the remainder of project activity. Monitoring shall be reinstated if any new ground disturbances are required to depths exceeding previous depths of previous work, and reduction or suspension shall be reconsidered by the Qualified Paleontologist at that time.
4. In the event of a fossil discovery by the paleontological monitor or construction personnel, all work in the immediate vicinity of the find shall cease. A Qualified Paleontologist shall evaluate

the find before restarting construction activity in the area. If it is determined that the fossil(s) is (are) scientifically significant, the Qualified Paleontologist shall complete the following conditions to mitigate impacts to significant fossil resources:

- a. **Salvage of Fossils.** If fossils are discovered, the paleontological monitor shall have the authority to halt or temporarily divert construction equipment within 50 feet of the find until the monitor and/or lead paleontologist evaluate the discovery and determine if the fossil may be considered significant. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the Construction Contractor may be requested to supply heavy equipment and an operator to assist in the rapid removal of a large fossil specimen(s) or sediment sample(s). Bulk matrix sampling may be necessary to recover small invertebrates or microvertebrates from within paleontologically- sensitive Quaternary old alluvial deposits.
  - b. **Preparation and Curation of Recovered Fossils.** Once salvaged, significant fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition, and curated in a scientific institution with a permanent paleontological collection (such as the UCMP), along with all pertinent field notes, photos, data, and maps. Fossils of undetermined significance at the time of collection may also warrant curation at the discretion of the Qualified Paleontologist.
5. **Final Paleontological Mitigation Report.** Upon completion of ground disturbing activity (and curation of fossils if necessary) the Qualified Paleontologist shall prepare a final report describing the results of the paleontological monitoring efforts associated with the project. The report shall include a summary of the field and laboratory methods, an overview of the project geology and paleontology, a list of taxa recovered (if any), an analysis of fossils recovered (if any) and their scientific significance, and recommendations. The report shall be submitted to the Department of Planning and Development at the City of Berkeley. If the monitoring efforts produced fossils, then a copy of the report shall also be submitted to the designated museum repository.

### **Significance After Mitigation**

Implementation of mitigation measure GEO-1 would reduce potential impacts to significant paleontological resources to less than significant levels. Further analysis in an EIR is not warranted.

### **LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

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## 7 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term "climate change" is often used interchangeably with the term "global warming," but climate change is preferred because it conveys that other changes are happening in addition to rising temperatures. The baseline against which these changes are measured originates in historical records that identify temperature changes that occurred in the past, such as during previous ice ages. The global climate is changing continuously, as evidenced in the geologic record which indicates repeated episodes of substantial warming and cooling. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed acceleration in the rate of warming over the past 150 years. The United Nations Intergovernmental Panel on Climate Change (IPCC) expressed a high degree of confidence (95 percent or greater chance) that the global average net effect of human activities has been the dominant cause of warming since the mid-twentieth century (IPCC 2014a).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The gases widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO<sub>2</sub>), methane, nitrous oxides, fluorinated gases such as hydrofluorocarbons and perfluorocarbons, and sulfur hexafluoride. Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere, and natural processes, such as oceanic evaporation, largely determine its atmospheric concentrations.

GHGs are emitted by natural processes and human activities. Of these gases, CO<sub>2</sub> and methane are emitted in the greatest quantities from human activities. Emissions of CO<sub>2</sub> are usually by-products of fossil fuel combustion, and methane results from off-gassing associated with agricultural practices and landfills. Human-made GHGs, many of which have greater heat-absorption potential than CO<sub>2</sub>, include fluorinated gases and SF<sub>6</sub> (United States Environmental Protection Agency [U.S. EPA] 2020). Different types of GHGs have varying global warming potentials (GWP). The GWP of a GHG is the



potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO<sub>2</sub>) is used to relate the amount of heat absorbed to the amount of the gas emitted, referred to as “carbon dioxide equivalent” (CO<sub>2</sub>e), and is the amount of GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 28, meaning its global warming effect is 28 times greater than carbon dioxide on a molecule per molecule basis (IPCC 2014b).<sup>3</sup>

The accumulation of GHGs in the atmosphere regulates the earth’s temperature. Without the natural heat-trapping effect of GHGs, the earth’s surface would be about 33° Celsius (°C) cooler (World Meteorological Organization 2020). However, emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

## State Regulations

### *California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Senate Bill 32)*

The “California Global Warming Solutions Act of 2006,” Assembly Bill [AB] 32, outlines California’s major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main State strategies for reducing GHGs to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, approved a 1990 statewide GHG level and 2020 target of 431 MMT of CO<sub>2</sub>e. CARB approved the Scoping Plan on December 11, 2008 and the Plan included measures to address GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2008). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Plan’s approval.

CARB approved the 2013 Scoping Plan update in May 2014. The update defined CARB’s climate change priorities for the next five years and set the groundwork to reach post-2020 statewide goals. The update highlighted California’s progress toward meeting the “near-term” 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the State’s longer term GHG reduction strategies with other State policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006 by requiring the State to further reduce GHGs to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 (see below). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally

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<sup>3</sup> The IPCC’s (2015) *Fifth Assessment Report* determined that methane has a GWP of 28. However, modeling of GHG emissions was completed using the California Emissions Estimator Model version 2016.3.2, which uses a GWP of 25 for methane, consistent with the IPCC’s (2007) *Fourth Assessment Report*.

appropriate quantitative thresholds consistent with statewide per capita goals of six MT of CO<sub>2</sub>e by 2030 and two MT of CO<sub>2</sub>e by 2050 (CARB 2017). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

### *Senate Bill 375*

SB 375, signed in August 2008, enhances the State's ability to reach AB 32 goals by directing CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. SB 375 aligns regional transportation planning efforts, regional GHG reduction targets, and affordable housing allocations. Metropolitan Planning Organizations (MPOs) are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the MPO's Regional Transportation Plan (RTP). Qualified projects consistent with an approved SCS or Alternative Planning Strategy (categorized as "transit priority projects") would receive incentives to streamline CEQA processing.

On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. The Metropolitan Transportation Commission (MTC) and Association of Bay Area Governments (ABAG) were assigned targets of a 10 percent reduction in GHG emissions from passenger vehicle sources below 2005 levels by 2020 and a 19 percent reduction in GHG emissions from passenger vehicle sources below 2005 levels by 2035. MTC and ABAG adopted Plan Bay Area 2040 in July 2017, which includes the region's Sustainable Communities Strategy and meets the requirements of SB 375 in place at its time of adoption (i.e., a 7 percent reduction by 2020 and a 15 percent reduction by 2035) (MTC and ABAG 2017a and 2017b). The updated 2018 SB 375 targets will be addressed in the next plan update, *Plan Bay Area 2050*.

## **Regional Regulations**

The Bay Area Air Quality Management District (BAAQMD) is responsible for enforcing standards and regulating stationary sources in its jurisdiction. BAAQMD regulates GHG emissions through specific rules, regulations, and project and plan level emissions thresholds for GHGs to ensure that the Bay Area contributes to its fair share of emissions reductions. In 2013, BAAQMD adopted a resolution that builds on state and regional climate protection efforts by:

- Setting a goal for the Bay Area region to reduce GHG emissions by 2050 to 80 percent below 1990 levels
- Developing a Regional Climate Protection Strategy to make progress towards the 2050 goal, using BAAQMD's Clean Air Plan to initiate the process
- Developing a 10-point work program to guide the BAAQMD's climate protection activities in the near-term

The BAAQMD is developing the Regional Climate Protection Strategy, but has outlined the 10-point work program, which includes policy approaches, assistance to local governments, and technical programs that will help the region make progress toward the 2050 GHG emissions goal.

### *Plan Bay Area 2040*

*Plan Bay Area 2040* is a state-mandated, integrated long-range transportation, land-use, and housing plan adopted by MTC and ABAG in July 2017 that supports a growing economy, provides more housing and transportation choices, and reduces transportation-related pollution in the nine-

county San Francisco Bay Area. *Plan Bay Area 2040* builds on earlier efforts to develop an efficient transportation network and grow in a financially and environmentally responsible way. *Plan Bay Area 2040* will be updated every four years to reflect new priorities. The goals of *Plan Bay Area 2040* related to GHG emissions include (MTC and ABAG 2017a and 2017b):

1. **Climate Protection.** Reduce per capita CO<sub>2</sub> emissions.
2. **Healthy and Safe Communities.** Reduce adverse health impacts.
3. **Open Space and Agricultural Preservation.** Direct development within urban footprint.
4. **Transportation.** Increase non-auto mode share.

*Plan Bay Area 2040* also identifies nearly 200 Priority Development Area (PDAs), which are existing neighborhoods served by public transit that MTC, ABAG, and local governments have identified as suitable for additional, compact development to focus future growth.

## **Local**

### *City of Berkeley Climate Action Plan*

The City of Berkeley adopted a Climate Action Plan (CAP) in 2009 with the goal of reducing community GHG emissions by 80 percent below 2000 levels by 2050. The core recommendation strategies and actions of the CAP center around the following topics (City of Berkeley 2009):

1. Sustainable Transportation and Land Use
2. Building Energy Use
3. Waste Reduction and Recycling
4. Community Outreach and Empowerment
5. Preparing for Climate Change Impacts

While the CAP is not considered a “qualified greenhouse gas reduction plan” for the purposes of streamlining GHG emissions analysis under CEQA, it is actively used by the City for GHG reductions. Since publication of the CAP, the City has outlined several additional climate commitments:

- 80 percent GHG reductions by 2050 (from 2000)
- 100 percent renewable electricity by 2035
- Net-Zero Carbon Emissions by 2045, in alignment with Gov Brown's Executive Order B-55-18
- Declared a Climate Emergency and resolved to become a Fossil Fuel Free City

### *City of Berkeley General Plan*

The City’s General Plan Environmental Management Element contains the following policies specific to GHG emissions:

**Policy EM-5 “Green” Buildings.** Promote and encourage compliance with “green” building standards

**Policy EM-8 Building Reuse and Construction Waste.** Encourage rehabilitation and reuse of buildings whenever appropriate and feasible in order to reduce waste, conserve resources and energy, and reduce construction costs.

**Policy EM-18 Regional Air Quality Action.** Continue working with the Bay Area Air Quality Management District and other regional agencies to:

1. Improve air quality through pollution prevention methods.
2. Ensure enforcement of air emission standards.
3. Reduce local and regional traffic (the single largest source of air pollution in the city) and promote public transit.
4. Promote regional pollution prevention plans for business and industry.
5. Promote strategies to reduce particulate pollution from residential fireplaces and wood-burning stoves.
6. Locate parking appropriately and provide signage to reduce unnecessary “circling” and searching for parking.

### *Berkeley Resiliency Strategy*

In 2016, the City released its Resilience Strategy to advance the City’s resilience, or the ability of the individuals, institutions, businesses, and systems within the community to survive, adapt, and grow no matter what chronic stress or acute shock it experiences. Berkeley interconnected resilience challenges include earthquakes, wildfires, climate change impacts such as drought and flooding, and racial inequity. The City’s Resilience Strategy emphasizes building community resilience by facilitation stronger connections between neighbors; between public, private, nonprofit, and academic institutions; between departments within the City government; and between Bay Area local and regional governments. The six goals of the Resilience Strategy are (City of Berkeley 2016):

1. Build a Connected and Prepared Community
2. Accelerate Access to Reliable and Clean Energy
3. Adapt to the Changing Climate
4. Advance Racial Equity
5. Excel at Working Together within City Government to Better Serve the Community
6. Build Regional Resilience

### *City of Berkeley Natural Gas Prohibition*

Berkeley Municipal Code Chapter 12.80 prohibits the use of natural gas infrastructure in all new construction. The two proposed new multi-family buildings at Parcel 2 would comply with this requirement. The existing buildings at 2012 and 2020 Dwight Way proposed to be relocated within Parcel 1 and renovated would continue to be supplied by natural gas.

## **Methodology**

GHG emissions for project construction and operation were calculated using CalEEMod version 2016.3.2. CalEEMod calculates emissions of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O associated with construction activities, energy use, area sources, waste generation, and water use and conveyance as well as emissions of CO<sub>2</sub> and CH<sub>4</sub> associated with project-generated vehicle trips (i.e. mobile sources). Because CalEEMod does not include an option for estimating emissions associated with renovations to the existing buildings, the relocated and renovated buildings at 2012 and 2020 Dwight Way were analyzed as new construction. Construction of new buildings would result in greater emissions than the proposed renovation activities; therefore, the CalEEMod results are conservative. Operational emissions were modeled for the year 2030 to be consistent with the State’s next GHG emission

reduction milestone target of achieving 40 percent reduction in 1990 GHG emission levels by 2030. Emissions of all GHGs are converted into their equivalent global warming potential in terms of CO<sub>2</sub> (i.e., CO<sub>2</sub>e). Complete CalEEMod results and assumptions are provided in Attachment AIR.

Operational emissions modeled include emissions generated by area sources, energy and water usage, mobile sources (i.e., vehicle emissions), and solid waste generation. Area source emissions are generated by landscape maintenance equipment and fireplaces. In accordance with BAAQMD Regulation 6, Rule 3, no wood-burning devices would be installed in new residential units.

Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (CAPCOA 2017). The project would be served by East Bay Community Energy (EBCE). Therefore, EBCE's specific energy intensity factors (i.e., the amount of CO<sub>2</sub>e per megawatt-hour) are used in the calculations of GHG emissions. As of 2018, EBCE's energy intensity factor for its base plan (Bright Choice), which consists of 41 percent eligible renewable energy resources, was 101 pounds of CO<sub>2</sub>e per megawatt-hour (EBCE 2019 and 2020). Per SB 100, the statewide Renewable Portfolio Standard (RPS) Program requires electricity providers to increase procurement from eligible renewable energy sources to 60 percent by 2030 and 100 percent by 2045. To account for the continuing effects of the RPS, the carbon intensity factor included in CalEEMod were reduced based on the percentage of renewables reported by EBCE. EBCE carbon intensity factors that include this reduction are shown in Table 12.

**Table 12 EBCE Energy Intensity Factors**

	2018 (lbs/MWh)	2030 (lbs/MWh) <sup>2</sup>
Percent procurement	41% <sup>1</sup>	60% <sup>3</sup>
Carbon dioxide (CO <sub>2</sub> )	101 <sup>2</sup>	68.47

<sup>1</sup> Source: EBCE 2020a

<sup>2</sup> Source: EBCE 2019

<sup>3</sup> RPS goal established by SB 100

Berkeley Municipal Code Chapter 12.80 prohibits the use of natural gas infrastructure in all new construction. While the renovated buildings at 2012 and 2020 Dwight Way would operate with natural gas, the two new buildings at Parcel 2 would comply with BMC Chapter 12.80. Therefore, no natural gas usage was included in the CalEEMod calculations for the new buildings.

Mobile source emissions consist of emissions generated by vehicle trips to and from the project site. Trip generation rates and VMT calculations for the proposed project were sourced from the Traffic Impact Analysis (Appendix TIA). Because CalEEMod does not calculate N<sub>2</sub>O emissions from mobile sources, N<sub>2</sub>O emissions for both the proposed project and the existing use were quantified using guidance from CARB and the EMFAC2017 Emissions Inventory for the BAAQMD region for the year 2040 using the EMFAC2011 categories (CARB 2018 and 2019; see Appendix AIR for calculations).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity demand as calculated by the California Energy Commission's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for northern and southern California (California Air Pollution Control Officers Association 2017). However, CalEEMod does not incorporate water use reductions required by CALGreen (Part 11 of Title 24). The proposed project would be subject to CALGreen, which requires a 20 percent increase in indoor water use efficiency and use of a water-efficient irrigation system. Thus, in order to account for compliance with

CALGreen, a 20 percent reduction in indoor water use and use of a water-efficient irrigation system were included in the water consumption calculations for the proposed housing units. In addition, the default wastewater assumptions for the proposed project were adjusted to account for the fact that wastewater from the site is treated by East Bay Municipal Utility District's treatment facility, which only utilizes anaerobic digester processes with no facultative lagoons or septic tanks.

## **Significance Thresholds**

The majority of individual projects do not generate sufficient GHG emissions to directly influence climate change. However, physical changes caused by a project can contribute incrementally to cumulative effects that are significant, even if individual changes resulting from a project are limited. The issue of climate change typically involves an analysis of whether a project's contribution towards an impact would be cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15064[h][1]).

According to the CEQA Guidelines, CEQA analyses of GHG impacts for projects can tier from a "qualified" GHG reduction plan. This allows for project-level evaluation of GHG emissions through the comparison of the project's consistency with the GHG reduction policies included in a qualified GHG reduction plan. This approach is considered by the Association of Environmental Professionals (AEP) in its white paper, "Beyond Newhall and 2020," to be the most defensible approach presently available under CEQA to determine the significance of a project's GHG emissions impact on the environment (2016). CEQA Guidelines Section 15183.5 defines the requirements for a plan to qualify as a comprehensive plan for the reduction of GHG emissions:

1. Quantify existing and projected GHG emissions within the plan area
2. Establish a reduction target based on substantial evidence, where GHG emission are not cumulatively considerable)
3. Identify and analyze sector specific GHG emissions from Plan activities
4. Specify policies and actions (measures) that local jurisdictions will enact and implement over time to achieve the specified reduction target
5. Establish a tool to monitor progress and amend if necessary
6. Adopt in a public process following environmental review

A key aspect of a "qualified" GHG reduction plan's ability to provide "substantial evidence" is that the identified reduction target establishes a threshold at which GHG emissions would not be cumulatively considerable. The AEP Beyond Newhall white paper identifies this criterion as being a local target that aligns with statewide legislative targets. The City of Berkeley adopted a Climate Action Plan (CAP) that sets a 2020 year target to achieve a 33 percent absolute reduction below 2000 community-wide emissions and identifies actions to achieve the target with the ultimate goal of 80 percent emissions reductions by 2050 (City of Berkeley 2009). The City of Berkeley's CAP is not a qualified GHG reduction strategy because the CAP does not establish a pathway to achieving the City's long-term goal for 2050 or the State's long-term goal of carbon neutrality by 2045. Therefore, the CAP does not qualify as a GHG reduction plan for projects with horizon years beyond 2020 and consistency with the CAP cannot be used as the basis of the CEQA analysis for the proposed project.

Instead, this analysis evaluates GHG emissions generated by the proposed project against a locally-appropriate, project-specific efficiency threshold derived from the SB 32 target, the City's 2050 goal,

and the City's GHG inventory from 2005, which is consistent with current best practices in the industry (AEP 2016). This provides a quantitative assessment of the project's GHG emissions compared to a project-specific threshold. The locally-appropriate, project-specific efficiency threshold used in this analysis was created to comply with the CEQA Guidelines and interpretative GHG case law. An efficiency threshold is calculated by dividing the allowable GHG emissions inventory in a selected calendar year by the service population (residents plus employees) in that year. This calculation identifies the quantity of emissions that can be generated on a per-service population basis without significantly impacting the environment. This approach is appropriate for the proposed project because it measures the project's emissions on a local per capita basis to determine its overall GHG emissions efficiency relative to regulatory GHG emission reduction goals.

For the proposed project, an efficiency threshold was calculated based on the target GHG emission levels that would be consistent with the State's 2030 target and the City's 2050 goal using the service population of the City of Berkeley in year 2040. This locally-appropriate, project-specific quantitative threshold is derived, in part, from the City's 2005 GHG inventory in line with CARB's recommendations in the 2008 Climate Change Scoping Plan and the 2017 Scoping Plan (CARB 2008; 2017). Consistent with the legal guidance provided in the Golden Door (2018) and Newhall Ranch (2015) decisions, regarding the correlation between state and local conditions, the City's 2005 GHG inventory was used to calculate a locally-appropriate, evidence-based, project-specific threshold consistent with California's SB 32 target and the City's 2050 goal. Accordingly, the threshold established in this report is a locally-applicable, project-specific threshold, as opposed to a threshold for general use.

The City completed a 2000 GHG inventory that calculated communitywide emissions of 631,863 MT of CO<sub>2</sub>e per year and a 2005 GHG inventory that calculated communitywide emissions of 575,889 MT of CO<sub>2</sub>e per year (Table 13).

Because the proposed project only involves housing, the Residential Energy and a portion of the Transportation sector emissions are appropriate to use in developing a project-specific threshold because future residents and employees of the project would consume energy and generate on-road vehicle trips. Therefore, the Commercial Energy and a portion of the Transportation sector emissions were conservatively excluded for the emissions total for project-applicable sectors. Because these sector emissions would not be applicable to the proposed project, these emissions were subtracted from the total emissions to calculate a project-applicable emissions total of 309,563 MT of CO<sub>2</sub>e for 2000 and 282,716 MT of CO<sub>2</sub>e for 2005.

**Table 13 City of Berkeley Baseline Inventories**

Source	2000 Total (MT of CO <sub>2</sub> e)	2005 Total (MT of CO <sub>2</sub> e)
Residential Energy	175,777	152,599
Commercial Energy	183,053	157,746
Transportation	273,033	265,544
<b>Total Emissions</b>	631,863	575,889
<b>Emissions from Project-Applicable Sectors</b>	309,563 <sup>1</sup>	282,716 <sup>2</sup>

<sup>1</sup> Includes Residential and 49 percent of transportation emissions. Transportation emissions were allocated proportionally between residential and commercial sectors based on energy consumption emission estimates (175,777 MT / [175,777 MT + 183,053 MT]).

<sup>2</sup> Includes Residential and 49 percent of transportation emissions. Transportation emissions were allocated proportionally between residential and commercial sectors based on energy consumption emission estimates (152,599 MT / [152,599 MT + 157,746 MT]).

Source: City of Berkeley 2009

AB 32 set a statewide target of reducing GHG emissions to 1990 levels by 2020. Therefore, for the City of Berkeley to be consistent with AB 32, annual GHG emissions levels from project-applicable sectors would need to be reduced by 15 percent below 2005 levels by 2020 to approximately 240,308 MT of CO<sub>2</sub>e per year. In addition, SB 32 set a statewide GHG emission reduction target of 40 percent below 1990 levels. Therefore, annual GHG emissions levels from project-applicable sectors would need to be reduced by 40 percent below 1990 levels to approximately 144,185 MT of CO<sub>2</sub>e per year to be consistent with SB 32. Accordingly, the 2030 project-specific efficiency threshold can be calculated by dividing total communitywide GHG emissions by the communitywide service population (residents + employees) for year 2030. The City's 2030 residential population would be approximately 135,680 persons (ABAG 2017a). Therefore, the 2030 locally-appropriate, project-specific threshold would be approximately 1.1 MT of CO<sub>2</sub>e per year (Table 14).

**Table 14 Locally-Applicable Project-Specific Efficiency Threshold**

Target Year	Value
2000 Baseline Levels <sup>1</sup>	309,563 MT of CO <sub>2</sub> e/year
2005 Baseline Levels <sup>1</sup>	282,716 MT of CO <sub>2</sub> e/year
2020 Target (AB 32) <sup>2</sup>	240,309 MT of CO <sub>2</sub> e/year
2030 Target (SB 32) <sup>3</sup>	144,185 MT of CO <sub>2</sub> e/year
2030 Residential Population <sup>4</sup>	135,680 persons
<b>2040 Project-Specific Efficiency Threshold</b>	<b>1.1 MT of CO<sub>2</sub>e per service person per year</b>

<sup>1</sup> 2005 emission levels from project-applicable sectors (Table 13).

<sup>2</sup> AB 32 sets a target of reducing GHG emissions to 1990 levels (i.e., 15 percent below 2005 levels) by 2020.

<sup>3</sup> SB 32 sets a target of reducing GHG emissions 40 percent below 1990 levels by 2030.

<sup>4</sup> Source: ABAG 2017



## Impact Analysis

- a. *Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?*

### Existing Emissions

The existing uses at the project site, including the medical offices and industrial spaces, emit GHGs through energy use, solid waste, water use, and mobile sources such as vehicle trips. The existing uses were estimated to result in approximately 115 MT of CO<sub>2</sub>e per year (complete CalEEMod results and assumptions are provided in Appendix AIR). These operational emissions were subtracted from the proposed project's emissions to determine the net increase in GHG emissions.

### Construction Emissions

Construction activities emit GHGs primarily through combustion of fuels (mostly diesel) in the engines of off-road construction equipment and through combustion of diesel and gasoline in on-road construction vehicles and in the commute vehicles of construction workers. Smaller amounts of GHGs are also emitted indirectly through the energy use embodied in any water use for fugitive dust control and lighting for construction activity. The BAAQMD has not established a quantitative significance threshold for evaluating construction-related emissions; however, the BAAQMD does recommend quantifying and disclosing construction-related GHG emissions. Therefore, construction-related GHG emissions were quantified for informational purposes. Project construction would generate approximately 1,150 MT of CO<sub>2</sub>e, or approximately 38 MT of CO<sub>2</sub>e per year when amortized over a 30-year period (the assumed life of the project).

### Combined Construction and Operational Emissions

Table 15 summarizes long-term GHG emissions generated by the project from area sources, energy use, solid waste, water use, and mobile sources and combines construction and operational GHG emissions. As shown therein, the project would result in a net increase of approximately 340 MT of CO<sub>2</sub>e per year when subtracting existing emissions, which would equate to approximately 0.9 MT of CO<sub>2</sub>e per resident per year. Therefore, per capita emissions would not exceed the project-specific, locally-applicable threshold of 1.1 MT of CO<sub>2</sub>e per resident per year. Impacts would be less than significant, and further analysis in an EIR is unwarranted.

**Table 15 Combined Annual GHG Emissions**

Emission Source	Annual Emissions (MT of CO <sub>2</sub> e)
<b>Operational</b>	
Area	3
Energy	33
Solid Waste	39
Water	8
Mobile	
CO <sub>2</sub> and CH <sub>4</sub>	362
N <sub>2</sub> O	10
<b>Total Project Emissions</b>	<b>455</b>
Existing Use Emissions	<b>115</b>
Net New Emissions	340
Population	383
Net New Emissions Per Capita	0.9
<b>Threshold</b>	<b>1.1</b>
<b>Threshold Exceeded?</b>	<b>No</b>
MT = metric tons; CO <sub>2</sub> e = carbon dioxide equivalents; CO <sub>2</sub> = carbon dioxide; CH <sub>4</sub> = methane; N <sub>2</sub> O = nitrous oxide See Appendix AIR for CalEEMod results and nitrous oxide emission calculations.	

## LESS THAN SIGNIFICANT IMPACT

- b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?*

### Plan Bay Area 2040

The proposed project would introduce an infill development on currently underutilized lots. The project site is within a transit priority area, which, as defined in Section 21099 of the California Public Resources Code, is an area within 0.5 mile of an existing or planned major transit stop. A “major transit stop” is defined in Section 21064.3 of the California Public Resources Code as a rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods. Alameda-Contra Costa Transit District (AC Transit) bus lines 6 and 51B stop at the intersection of Shattuck Avenue and Durant Avenue, which is approximately 0.3 miles from the site. Those lines operate at service intervals of 10 minutes during the morning and afternoon peak commute periods.

The surrounding neighborhood also contains extensive existing pedestrian and bicycle infrastructure that connects to surrounding areas of the city, including the Downtown neighborhood. Increased alternative transportation and transit options would reduce vehicle trips and average vehicle miles travelled by new residents of the project, thereby reducing mobile source GHG emissions and

contributing to achieving the GHG emissions reduction goals set forth by SB 32 and SB 375. Furthermore, as discussed in Section 16, *Transportation*, daily VMT associated with the proposed project would be approximately 7.9 VMT per capita, which would be approximately 47 percent lower than the Bay Area regionwide average of 15.0 VMT per capita. Therefore, the project would be consistent with *Plan Bay Area 2040*. Impacts would therefore be less than significant, and further analysis in an EIR is unwarranted.

## City of Berkeley Climate Action Plan

The City's CAP recommends 30 goals to reduce communitywide and municipal GHG emissions in order to achieve the City's interim target of a 33 percent reduction in communitywide GHG emissions below 2000 levels by 2020 with the ultimate goal of reducing emissions by 80 percent below 2000 levels by 2050. The measures included in the CAP cover the main sectors of GHG emissions including transportation and land use, building energy usage, and waste reduction and recycling. The measures applicable to the project are summarized in Table 16. As shown therein, the project would be consistent with applicable GHG reduction measures in the City's CAP, and impacts would be less than significant. Further analysis in an EIR is unwarranted.

**Table 16 Project Consistency with Applicable Climate Action Plan Measures**

Recommended Goals	Project Consistency
<b>Sustainable Transportation and Land Use</b>	
<b>Goal 1:</b> Increase density along transit corridors.	<b>Consistent:</b> The project would involve increased residential density in a transit priority area, as defined Section 21064.3 of the California Public Resources Code. The site is within walking distance of stops for several AC Transit bus lines and the Downtown BART Station.
<b>Goal 2:</b> Increase and enhance urban green and open space, including local food production, to improve the health and quality of life for residents, protect biodiversity, conserve natural resources, and foster walking and cycling.	<b>Consistent:</b> The project would involve infill development in the existing urban footprint of Berkeley. The new development would provide new landscaped open space areas via gardens, walkways, and gathering places at the ground level and on roof decks. Therefore, the project would incrementally increase urban green and open space within the City of Berkeley. In addition, the project would involve new housing with access to existing walkable and bikeable neighborhoods, including a Class III bike route on Milvia Street north of Allston Way.
<b>Goal 3:</b> Manage parking more effectively to minimize driving demand and to encourage and support alternatives to driving.	<b>Consistent:</b> The proposed project would involve new housing at a site that is within walking distance of public transit stops and shops and services in commercial areas. The project would also provide 99 bicycle parking spaces for residents. Given this access to services and alternative transportation methods, the project would minimize driving demand.
<b>Goal 8:</b> Encourage the use of low-carbon vehicles and fuels.	<b>Consistent:</b> The proposed project would be subject to the requirements of the most recent iteration of CALGreen and BMC Chapter 19.37, which include provisions for electric vehicle charging infrastructure. For example, the 2019 CALGreen requires ten percent of parking spaces to be electric vehicle charging spaces capable of supporting future electric vehicle supply equipment and installation of electric vehicle charging stations for at least three percent of the parking spaces for all new multi-family developments such as the proposed project.

Recommended Goals	Project Consistency
<b>Building Energy Use</b>	
<b>Goal 1:</b> Make green building business as usual in the new construction & remodel market.	<b>Consistent:</b> The proposed project would be required to be constructed in accordance with the latest iteration of CALGreen the California Building Energy Efficiency Standards and BMC Chapters 19.36 and 19.37, which include green building practices. In addition, the new buildings proposed at the southern portion of the site would be fully electric per the requirements of Berkeley Municipal Code Section 12.80, which would reduce GHG emissions associated with energy usage. As described in the <i>Description of Project</i> Section, the project would also include additional green building features, including built-in composting and recycling centers, efficient clothes washing and drying machines, and high efficiency lighting.
<b>Goal 4:</b> Increase residential and commercial renewable energy use.	<b>Consistent:</b> The proposed project would be automatically enrolled in EBCE's Bright Choice service, which currently provides approximately 41 percent of electricity from eligible renewable energy sources and approximately 62 percent of electricity from carbon-free sources (EBCE 2020a).
<b>Waste Reduction and Recycling</b>	
<b>Goal 1:</b> Increase residential recycling, composting, and source reduction.	<b>Consistent:</b> In accordance with the Alameda County Waste Management Authority Mandatory Recycling Ordinance 2012-01, the proposed project would be required to provide recycling service for tenants. Furthermore, residents would be required to separate plant debris from garbage in compliance with the Alameda County Waste Management Authority Plant Debris Landfill Ban Ordinance 2008-01. Future residents would also have the opportunity to dispose of food waste through the City's residential plant debris and food waste collection service.
<b>Goal 3:</b> Increase recycling of construction & demolition (C&D) debris.	<b>Consistent:</b> The project applicant would be required to divert at least 65 percent of construction and demolition debris per the requirements of CALGreen.
<sup>1</sup> Linear interpolation between SB 100 targets of 60 percent for 2030 and 100 percent for 2045. Source: City of Berkeley 2009	

## LESS THAN SIGNIFICANT IMPACT

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## 8 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. For a project located in an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

## Hazards Setting

### *Phase I Environmental Site Assessment*

A Phase I Environmental Site Assessment (ESA) was prepared for the project site by Terraphase Engineering Inc. in December 2018, included in Appendix HAZ to this Initial Study. As part of the Phase I ESA, Environmental Data Resources, Inc. (EDR) was contracted to provide a database search of public lists of sites that generate, store, treat, or dispose of hazardous materials or sites for which a release or incident has occurred for the project site and surrounding area. Federal, state, and county lists were reviewed as part of the research effort.

### ADJACENT PROPERTIES

Eight adjacent properties were listed in the databases searched by EDR:

- **2034 Blake Street** is across Blake Street, southeast of the project site. The property is listed in the Leaking Underground Storage Tank (LUST) database. Terraphase also contacted the City of Berkeley Toxics Management Division (TMD) regarding this property. Information contained in the files indicated that two USTs were located in the rear of the property but removed from the property in 1988. Low levels of total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and xylenes were detected in soil samples collected from beneath the tanks following removal. In 1999, the RWQCB issued a case closure letter for the property. Given that the USTs were located at the rear of the 2034 Blake Street property and the case has been granted regulatory closure, this property would not pose a significant risk to the project site.
- **2001 Dwight Way** is across Dwight Way, north of the project site. This property is listed in several databases including the California Environmental Reporting System (CERS), CERS Haz Waste, CERS Tanks, above-ground storage tank (AST) database, RCRA Large Quantity Generator (LQG), and various UST databases. The nature of the materials stored and handled at the property are related to operation of Alta Bates Medical Center. Violations reported include improper waste labeling, failure to close waste containers when not in use, and improper hazardous materials reporting. The property is also listed in the LUST database. A case closure letter indicates that two USTs were removed from the site in 1994 and the Berkeley TMD issued a no further action letter. Petroleum impacts were reportedly not detected in groundwater and the site was granted closure in 1999. Based on the regulatory closed status of the listing, a lack of identified groundwater impacts, and the downgradient location relative to the site, this listing would not pose a significant risk to the project site.
- **2558 Shattuck Avenue** is southeast of the project site. It appears the property has been used as an automotive repair shop since the 1920s. Numerous violations related to hazardous materials reporting and training were noted in the EDR report in 2013, 2014, 2016, and 2017. Based on the nature of the violations reported in the EDR report, this listing would not pose a significant risk to the project site.
- **2555 Shattuck Avenue** is southeast of the project site. This listing is identified as a LUST case (gasoline) that received regulatory closure in 1994. Based on the regulatory closed status of the listing and distance from the project site, this listing would not pose a significant risk to the site.
- **2440 Shattuck Avenue** is northeast of the project site. This address appears in the EDR report as a hazardous waste generator and a facility required to report hazardous materials handling and storage to the local Certified Unified Agency Program (CUPA). Violations identified in the EDR report included failure to conduct proper employee training, failure to report hazardous

materials properly, and failure to label wastes properly. Based on the nature of the business conducted at the property and the nature of the violations reported in the EDR report, this listing would not pose a significant risk to the project site.

- **2567 Shattuck Avenue** is southeast of the project site. This listing is identified as a LUST case (gasoline) that received regulatory closure in 1999. Based on the regulatory closed status of the listing and distance from the project site, this listing would not pose a significant risk to the site.
- **2114 Blake Street** is southeast of the project site. This listing is identified as a property with a 1,000-gallon gasoline UST and appears to be associated with 2600 Shattuck Avenue, as described below.
- **2600 Shattuck Avenue** is southeast of the project site. This site is listed on the LUST, NPDES, and AST databases. California GeoTracker reports that a 1,000-gallon UST was removed on April 25, 2006. Berkeley TMD required over-excavation to obtain representative soil samplings. The case was closed on January 12, 2007. The closure report states that residual hydrocarbons are likely present at approximately 6 to 12 feet depth in the excavation sidewalls, especially within the southern sidewall. The southern sidewall was located at the curb line of Carleton Street, which limited additional over-excavation in this direction.

The GeoTracker file also includes a letter notifying Berkeley TMD of the pending redevelopment at 2600 Shattuck Avenue. Enclosed in the letter is a technical report describing additional soil and soil-vapor sampling and remedial excavation work which concluded that no additional sampling or remedial work is required to construct a residential apartment complex. Based on the status indicating that remedial action has been completed and relative gradient, this listing would not pose a significant risk to the project site.

- **2107 Dwight Way** is northeast of the project site. This property is identified as a brownfields development site which received closure in 2017. Dry cleaning operations took place at the property as early as the 1930s and through approximately 1971 under the names Shattuck Laundry and Dry Cleaners (1930s - 1940s) and Rainbow Cleaners (1950s - 1971). The primary location of the former operations is associated with the address 2473 Shattuck Avenue. The property was redeveloped as an apartment building. Based on the status indicating that remedial action has occurred and relative gradient, this listing would not pose a significant risk to the project site.

## PROJECT SITE

Based on the EDR report and a review of available documents, the project site is not identified in any of the regulatory agency databases. However, the Phase I ESA also documents City of Berkeley TMD files associated with two of the parcels within the project site. Both files relate to hazardous materials inspections conducted by the Berkeley TMD at 2015 Blake Street (for the Timberline Geodesics business) and 2019 Blake Street (for the Skylight and Sun Inc. business). Both inspections found that hazardous materials were not present or used in significant quantities at either business.

The Phase I ESA includes a conclusion about the recognized environmental conditions (RECs) associated with the project site. An REC is the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or the material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The following REC was identified for the project site:



- Given the age of the existing structures and historical operations (e.g., automotive repair and paint storage) conducted at portions of the project site, there is a potential for metals (such as lead), volatile organic compounds, and petroleum hydrocarbons to be present in shallow surface soils at the project site.

Given this REC, the Phase I ESA provides the following recommendation for the proposed project:

- Given the historical site uses, if excavation and off-site disposal of soil is required, the soil should be sampled for metals, VOCs, and petroleum hydrocarbons for the purposes of waste characterization.

## **Impact Analysis**

- a. *Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?*
- b. *Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?*

### *Construction Activities*

The project would involve demolition of four of the existing structures within the project site, relocation and renovation of two other existing structures, and construction of two new multi-story residential structures, including a subterranean parking garage. Demolition and construction activities may include the temporary transport, storage, use, or disposal of potentially hazardous materials including fuels, lubricating fluids, cleaners, solvents, or contaminated soils. If spilled, these substances could pose a risk to the environment and to human health. However, the transport, storage, use, or disposal of hazardous materials is subject to various federal, state, and local regulations designed to reduce risks associated with hazardous materials, including potential risks associated with upset or accident conditions. Hazardous materials would be required to be transported under U.S. Department of Transportation (DOT) regulations (U.S. DOT Hazardous Materials Transport Act, 49 Code of Federal Regulations), which stipulate the types of containers, labeling, and other restrictions to be used in the movement of such material on interstate highways. In addition, the use, storage, and disposal of hazardous materials are regulated through the Resources Conservation and Recovery Act (RCRA). The California Department of Toxic Substances Control (DTSC) is responsible for implementing the RCRA program, as well as California's own hazardous waste laws. DTSC regulates hazardous waste, cleans up existing contamination, and looks for ways to control and reduce the hazardous waste produced in California. It does this primarily under the authority of RCRA and in accordance with the California Hazardous Waste Control Law (California H&SC Division 20, Chapter 6.5) and the Hazardous Waste Control Regulations (Title 22, California Code of Regulations, Divisions 4 and 4.5). DTSC also oversees permitting, inspection, compliance, and corrective action programs to ensure that hazardous waste managers follow federal and State requirements and other laws that affect hazardous waste specific to handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning. Compliance with existing regulations would reduce the risk of potential release of hazardous materials during construction.

In addition, the existing structures, which, according to the DPR forms prepared for the site (Appendix DPR), were constructed as early as the 1920s, may contain asbestos and/or lead-based paint (LBP) due to their age. Structures built before the 1970s were constructed typically with

asbestos containing materials (ACM). Because the buildings were constructed before the time of the federal ban on the manufacture of PCBs, it is possible that light ballasts in the structures contain PCB. Demolition of the existing structure could result in health hazard impacts to workers if not remediated prior to construction activities. However, demolition and construction activities would be required to adhere to BAAQMD Regulation 11, Rule 2, which governs the proper handling and disposal of ACM for demolition, renovation, and manufacturing activities in the Bay Area, and California Occupational Safety and Health Administration (CalOSHA) regulations regarding lead-based materials. The California Code of Regulations, §1532.1, requires testing, monitoring, containment, and disposal of lead-based materials, such that exposure levels do not exceed CalOSHA standards. DTSC has classified PCBs as a hazardous waste when concentrations exceed 50 parts per million in non-liquids, and the DTSC requires that materials containing those concentrations of PCBs be transported and disposed of as hazardous waste. Light ballasts to be removed would be evaluated for the presence of PCBs and managed appropriately. With required adherence to BAAQMD, CalOSHA, and DTSC regulations regarding ACM, LBP, and PCBs impacts would be less than significant.

Finally, the project would be subject to the following standard condition of approval, which applies to all discretionary projects in Berkeley involving demolition or construction:

Toxics. The applicant shall contact the Toxics Management Division (TMD) at 1947 Center Street or (510) 981-7470 to determine which of the following documents are required and timing for their submittal:

A. Environmental Site Assessments:

1. Phase I & Phase II Environmental Site Assessments (latest ASTM 1527-13). A recent Phase I ESA (less than 6 months old\*) shall be submitted to TMD for developments for:
  - All new commercial, industrial and mixed use developments and all large improvement projects.
  - All new residential buildings with 5 or more dwelling units located in the Environmental Management Area (or EMA).
  - EMA is available online at:  
[http://www.cityofberkeley.info/uploadedFiles/IT/Level\\_3\\_-\\_General/ema.pdf](http://www.cityofberkeley.info/uploadedFiles/IT/Level_3_-_General/ema.pdf)
2. Phase II ESA is required to evaluate Recognized Environmental Conditions (REC) identified in the Phase I or other RECs identified by TMD staff. The TMD may require a third party toxicologist to review human or ecological health risks that may be identified. The applicant may apply to the appropriate state, regional or county cleanup agency to evaluate the risks.
3. If the Phase I is over 6 months old, it will require a new site reconnaissance and interviews. If the facility was subject to regulation under Title 15 of the Berkeley Municipal Code since the last Phase I was conducted, a new records review must be performed.

B. Soil and Groundwater Management Plan:

1. A Soil and Groundwater Management Plan (SGMP) shall be submitted to TMD for all non-residential projects, and residential or mixed-use projects with five or more dwelling units, that: (1) are in the Environmental Management Area (EMA) and (2) propose any excavations deeper than 5 feet below grade. The SGMP shall be site specific and identify procedures for soil and groundwater management including

identification of pollutants and disposal methods. The SGMP will identify permits required and comply with all applicable local, state and regional requirements.

2. The SGMP shall require notification to TMD of any hazardous materials found in soils and groundwater during development. The SGMP will provide guidance on managing odors during excavation. The SGMP will provide the name and phone number of the individual responsible for implementing the SGMP and post the name and phone number for the person responding to community questions and complaints.
3. TMD may impose additional conditions as deemed necessary. All requirements of the approved SGMP shall be deemed conditions of approval of this Use Permit.

C. Building Materials Survey:

1. Prior to approving any permit for partial or complete demolition and renovation activities involving the removal of 20 square or lineal feet of interior or exterior walls, a building materials survey shall be conducted by a qualified professional. The survey shall include, but not be limited to, identification of any lead-based paint, asbestos, polychlorinated biphenyl (PBC) containing equipment, hydraulic fluids in elevators or lifts, refrigeration systems, treated wood and mercury containing devices (including fluorescent light bulbs and mercury switches). The Survey shall include plans on hazardous waste or hazardous materials removal, reuse or disposal procedures to be implemented that fully comply state hazardous waste generator requirements (22 California Code of Regulations 66260 et seq). The Survey becomes a condition of any building or demolition permit for the project. Documentation evidencing disposal of hazardous waste in compliance with the survey shall be submitted to TMD within 30 days of the completion of the demolition. If asbestos is identified, Bay Area Air Quality Management District Regulation 11-2-401.3 a notification must be made and the J number must be made available to the City of Berkeley Permit Service Center.

D. Hazardous Materials Business Plan:

1. A Hazardous Materials Business Plan (HMBP) in compliance with BMC Section 15.12.040 shall be submitted electronically at <http://cers.calepa.ca.gov/> within 30 days if on-site hazardous materials exceed BMC 15.20.040. HMBP requirement can be found at <http://ci.berkeley.ca.us/hmr/>

The removal, transport, storage, use, or disposal of hazardous materials would be subject to federal, state, and local regulations pertaining to the transport, use, storage, and disposal of hazardous materials, including those outlined in the standard condition of approval above. Compliance with these requirements would assure that risks associated with hazardous materials would be minimized. Impacts would be less than significant.

*Operational Activities*

The project would involve the construction of new residential buildings and renovation of existing residential buildings. Operation of residential uses typically does not involve the use or storage of large quantities of hazardous materials. Operation of the project would therefore not involve the use, storage, transportation, or disposal of hazardous materials other than those typically used for household cleaning, maintenance and landscaping. Therefore, impacts would be less than significant and further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

- c. *Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?*

Three schools occur within 0.25 miles of the project site: Walden Center and School, approximately 0.2 miles west of the site, Berkeley High School, approximately 0.15 miles northwest of the site, and Berkeley Technology Academy, approximately 0.15 miles southwest of the site. In addition, several other schools are located further than 0.25 miles but still relatively near the site. As outlined above under questions (a) and (b) above, demolition of the existing structures would require removal and movement of materials contaminated by asbestos and lead-based paint, and excavation and construction activities could involve removal and movement of contaminated soils. Hauling of such materials may occur within 0.25 mile of school facilities. However, given required compliance with the rules and regulations described above questions (a) and (b) above, impacts to schools would be less than significant, and further analysis of this issue in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

- d. *Would the project be located on a site that is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?*

As described in the *Hazards Setting* section above, the parcels within the project site are not included on lists of hazardous materials sites. However, the soil at the project site may contain hazardous materials associated with historical automotive repair and paint storage uses, and the Phase I ESA prepared for the project recommends that soil samples should be taken prior to any excavation at the site (Appendix HAZ).

Based on the site conditions identified in the Phase I ESA, the proposed construction activities, including excavation to accommodate the proposed subterranean parking garage, could expose construction workers or nearby residents to potentially unacceptable health risks from contaminated soil. Therefore, impacts would be potentially significant. However, the project would be subject to the standard condition approval described under questions (a) and (b) above. Since the Phase I prepared for the project is more than six months old, the condition of approval would require that the project applicant prepare an updated Phase I ESA to evaluate contamination at the site. (Given the ongoing nature of the current uses within the project site, no additional RECs are likely to be identified in an update Phase I.) In addition, the condition of approval would require that the applicant prepare a Phase II ESA to evaluate the RECs identified in the updated Phase I, including the potential presence of for metals and petroleum hydrocarbons identified in Appendix HAZ. Moreover, because the project would involve excavation beyond below five feet, the applicant would be required to prepare a SGMP to identify procedures for soil and groundwater management and a Building Materials Survey, which would include plans on hazardous waste or hazardous materials removal, reuse or disposal procedures. These materials would be submitted for review and approval to the Berkeley TMD prior to issuance of building permits associate with the project. Given compliance with this condition of approval, impacts related to potential hazard to the public or the environment from hazardous materials sites would be less than significant.

**LESS THAN SIGNIFICANT IMPACT**

- e. *For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?*

The Oakland International Airport (OAK) is the closest airport to the project site, approximately 10.5 miles southeast of the site. There are no private airstrips in the vicinity of the site. The project site is located entirely outside the airport safety and traffic pattern zones (County of Alameda 2010). Therefore, no impact related to airport safety would occur and further analysis in an EIR is not warranted.

**NO IMPACT**

- f. *Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?*

The new and renovated buildings proposed under the project would be located on private property and would not obstruct existing roadways or require the construction of new roadways or access points. Therefore, the proposed buildings would not block emergency response or evacuation routes. In addition, local requirements and review procedures would ensure that project would not interfere with emergency response or evacuation. Building permit applications for the project would be reviewed by the Department of Public Works and the Berkeley Fire Department for potential problems with existing emergency access within the City. The project would therefore not result in buildings that would block emergency response or evacuation routes or interfere with adopted emergency response and emergency evacuation plans. No impact would occur and further analysis of this issue in an EIR is not warranted.

**NO IMPACT**

- g. *Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?*

As described below in Section 19, *Wildfire*, the project site is in a highly developed urban area and is not within or adjacent to a wildland fire hazard area. Therefore, the project would not expose people or structures to a significant loss, injury or death involving wildland fires.

**NO IMPACT**

## 9 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
(i) Result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(iv) Impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. In flood hazard, tsunامي, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## **Hydrology and Water Quality Setting**

### *Local Watersheds*

The project site within the Potter Watershed, which drains to the San Francisco Bay. The Potter Watershed is the largest watershed in the City and includes the areas south of the Strawberry Creek Watershed to the Oakland City Limit, and from Claremont Canyon in the east to the San Francisco Bay shoreline in the west. The watershed begins in the hills at the east limit and directs flows to the west through natural open channels, and through manmade storm drains.

### *Groundwater*

Water supply for the City of Berkeley is provided by the East Bay Municipal Utilities District (EBMUD). The majority of the water delivered by EBMUD originates from the Mokelumne River watershed, and the remaining water originates as runoff from the protected watershed lands and reservoirs in the East Bay Hills. Supplemental groundwater projects would allow EBMUD to be flexible in response to changing external conditions, such as single-year or multiple-year droughts. For example, the Bayside Groundwater Project will allow EBMUD to bank water during wet years for extraction, treatment, and use during dry years. Construction of the project was completed in 2010, but subsequent dry conditions and the need to obtain the necessary approvals have prevented EBMUD from injecting water into the project (EBMUD 2015).

### *Flood Hazards*

The Federal Emergency Management Agency (FEMA) establishes base flood elevations (BFE) for 100-year and 500-year flood zones and establishes Special Flood Hazard Areas (SFHA). SFHAs are those areas within 100-year flood zones or areas that will be inundated by a flood event having a one percent chance of being equaled or exceeded in any given year. The 500-year flood zone is defined as the area that could be inundated by the flood which has a 0.2 percent probability of occurring in any given year, or once in 500 years, and is not considered an SFHA. Development in flood zones is regulated through the Berkeley Municipal Code Chapter 17.12 Flood Development. The project site is not located in an SFHA or 100-year flood zone.

## **Regulatory Setting**

### *Federal Clean Water Act*

In 1972, Congress passed the Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA), with the goal of “restor[ing] and maintain[ing] the chemical, physical, and biological integrity of the Nation’s waters” (33 U.S.C. § 1251(a)). The CWA directs states to establish water quality standards for all “waters of the United States” and to review and update such standards on a triennial basis. Section 319 mandates specific actions for the control of pollution from non-point sources. The EPA has delegated responsibility for implementation of portions of the CWA, including water quality control planning and control programs, such as the National Pollutant Discharge Elimination System (NPDES) Program, to the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCBs).

Section 303(c)(2)(b) of the CWA requires states to adopt water quality standards for all surface waters of the United States based on the water body’s designated beneficial use. Water quality standards applicable to the proposed project are contained in the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan).

### *National Pollutant Discharge Elimination System (NPDES)*

The City of Berkeley lies within the jurisdiction of San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) (Region 2) and is subject to the waste discharge requirements of the Municipal Regional Stormwater Permit (MRP) (Order No. R2-2015-0049) and NPDES Permit No. CAS612008, which was issued on November 19, 2015 and went into effect on January 1, 2016. A new version of the MRP is currently in negotiation between the Regional Water Board and the Clean Water Program. The new MRP will likely go into effect in mid-2021.

Under Provision C.3 of the MRP, Berkeley is required to use its planning authority to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address stormwater runoff pollutant discharges and address increases in runoff flows from new development and redevelopment projects. These requirements are generally reached through the implementation of Low Impact Development (LID) techniques (City of Berkeley 2011). Some requirements (i.e., demolitions and special use rules) may become more stringent with implementation of the new version of the MRP expected in 2021.

The NPDES permit requires appropriate LID and Stormwater Treatment technologies in new development and redevelopment projects, in order to mimic the natural hydrology of the lands prior to disturbance. The objective of LID and post-construction BMPs for stormwater is to reduce runoff and mimic a site's predevelopment hydrology by minimizing disturbed areas and impervious cover and then infiltrating, storing, detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, green roofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.

### *State Updated Model Water Efficient Landscape Ordinance (Assembly Bill 1881)*

The updated Model Water Efficient Landscape Ordinance required cities and counties to adopt landscape water conservation ordinances by January 31, 2010 or to adopt a different ordinance that is at least as effective in conserving water as the updated Model Water Efficient Landscape Ordinance (WELO). The City of Berkeley adopted the Bay-Friendly Landscape Ordinance in accordance with this requirement. The ordinance incorporates landscape protocols developed by the Alameda County Waste Management Authority and all parameters in the WELO. The ordinance became effective as of February 1, 2010. In May of 2015, the governor issued Executive Order B-29-15 requiring the state to revise the model WELO to increase water efficiency standards for new and retrofitted landscapes through more efficient irrigation systems, greywater usage, onsite stormwater capture, and by limiting the portion of landscapes that can be covered in turf. The last update to the City's Water Efficient Landscape Ordinance occurred on December 1, 2015.

### *Alameda County Clean Water Program*

The City of Berkeley enforces the provisions of the second Municipal Regional Stormwater NPDES Permit (MRP2) issued by the SFBRWQCB, which identify "regulated projects" and sets requirements for new development and significant redevelopment projects, including post-construction stormwater management requirements. Provision C.3 requirements are separate from, and in addition to, requirements for erosion and sediment control and for pollution prevention measures during construction. New development or redevelopment projects that create or replace 10,000



square feet of impervious surfaces or 5,000 square feet or more of impervious surface for special land use categories (i.e., uncovered parking lots, restaurants, auto service facilities, and gasoline stations) are “regulated projects” and are required to implement site design measures, source control measures, and stormwater treatment measures to reduce stormwater pollution during operation of the project. Regulated projects subject to stormwater treatment measures would require the implementation of LID features, such as harvesting and reuse, bioretention areas, pervious paving, green roofs, and flow-through planters. Systems must be designed to treat stormwater runoff volume equal to the 85th percentile 24-hour storm event, 80 percent of the annual runoff from the site, a flow design of runoff from a rain event equal to 0.2 inches/hour intensity, or an equivalent method (City of Berkeley 2011).

The project site is within the solid white area on Alameda County Wide Clean Water Program’s (CWP) Hydromodification Management Susceptibility Map (Alameda County 2007). According to the CWP, solid white designates the land area between the hills and the tidal zone. The hydromodification standard and associated requirements apply to projects in the solid white area unless a project proponent demonstrates that all project runoff would flow through fully hardened channels. Plans to restore a hardened channel may affect the hydromodification standard applicability in this area. This would require projects in the hydromodification area that create and/or replace one acre or more of impervious surface to match post-development stormwater flow rates and volumes to pre-development conditions.

## **Impact Analysis**

- a. *Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?*

### *Construction Impacts*

Construction activities for proposed project could cause soil erosion from exposed soil, an accidental release of hazardous materials used for equipment such as vehicle fuels and lubricant, or temporary siltation from storm water runoff. Soil disturbance would occur during excavation, demolition and relocation of the existing buildings, and grading, including for improvements to open space and landscaped areas. However, construction activities would be required to comply with state and local water quality regulations designed to control erosion and protect water quality during construction. This includes compliance with BMC Chapter 21.40, which requires that proposed projects comply with grading, erosion, and sediment control regulations on file in the Public Works Department, and BMC Chapter 17.20, which requires that Best Management Practices (BMPs), including those adopted by the State Water Resources Control Board (SWRCB), be implemented to minimize non-stormwater discharges during construction. Construction BMPs would include scheduling inlet protection, silt fencing, fiber rolls, stabilized construction entrances, stockpile management, solid waste management, and concrete waste management. As described in Section 6, *Geology and Soils*, groundwater may be encountered during construction activities. In that case, the Public Works Department would require that discharge be pumped through a pipe system that is connected to the fully piped storm drain in order to avoid discharge at street crossings and other hazards. Post-construction stormwater performance standards are also required to specifically address water quality and channel protection events. Implementation of these BMPs would prevent or minimize environmental impacts and ensure that discharges during construction of the proposed project would not cause or contribute to the degradation of water quality in receiving waters. The proposed

project therefore would not result in the degradation of water quality in receiving waters; construction-related water quality impacts would be less than significant.

Compliance with local and State regulatory requirements and implementation of construction BMPs would minimize discharges during the construction phase of the proposed project. The project would therefore not result in the degradation of water quality in receiving waters; construction-related water quality impacts would be less than significant.

### *Operational Impacts*

The City of Berkeley is responsible for enforcing the requirements of MRP2 or the applicable NPDES Permit. Compliance with the MRP2 or the applicable NPDES Permit includes both operational and maintenance BMPs and construction related BMPs. Provisions specified in MRP2 or the applicable NPDES Permit that affect construction projects generally include but are not limited to Provision C.3 (New Development and Redevelopment), Provision C.6 (Construction Site Control), and Provision C.15 (Exempted and Conditionally Exempted Discharges). The project would be required to comply with these provisions, which are described in further detail below:

- **Provision C.3** requires that Low Impact Development (LID) techniques be utilized to employ appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects; to address stormwater runoff pollutant discharges; and to prevent increases in runoff flows from new development and redevelopment projects by mimicking a site's predevelopment hydrology. This is to be accomplished by employing principles such as minimizing disturbed areas and imperviousness, and preserving and recreating natural landscape features, in order to "create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product" (SFBRWQCB 2015). The project would be required to enter into an Operation and Maintenance agreement with the City, which would ensure the effective long-term avoidance of significant adverse impacts associated with water quality degradation.
- **Provision C.6** requires implementation of a construction site inspection and control program at all construction sites and an Enforcement Response Plan to prevent construction-related discharges of pollutants into storm drains. Inspections confirm implementation of appropriate and effective erosion and other BMPs by construction site operators/developers, and Permittee reporting is used to confirm and demonstrate the effectiveness of its inspections and enforcement activities to prevent polluted construction site discharges into storm drains.
- **Provision C.15** exempts specified unpolluted non-stormwater discharges and to conditionally exempt non-stormwater discharges that are potential sources of pollutants. In order for non-stormwater discharges to be conditionally exempted, the Permittees must identify appropriate BMPs, monitor the non-stormwater discharges where necessary, and ensure implementation of effective control measures to eliminate adverse impacts to waters of the state consistent with the discharge prohibitions of the Order.

Compliance with the applicable state and local requirements described above would ensure that operation of the project would reduce the risk of water contamination to the maximum extent practicable. The project would employ LID techniques, including installation of bioretention treatment basins and flow-through planters in the landscaped areas throughout the site, which would increase infiltration and water treatment. Therefore, operation of the project would not

violate water quality standards or waste discharge requirements or substantially degrade water quality. Impacts would be less than significant and further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

- b. *Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?*

The proposed project would not use or deplete groundwater resources. Water supply for the project site is provided by EBMUD. The groundwater aquifer beneath Berkeley is not currently used for water storage or drinking water supply. Therefore, the project would not involve installation of new groundwater wells or use of groundwater from existing wells.

The project site is in a fully urbanized area, and implementation of the proposed project would consist of intensification through redevelopment that could introduce impervious areas that would interfere with groundwater recharge. However, the project would involve a net reduction of impermeable surfaces and would therefore not result in an increase in stormwater runoff. The project site (41,736 square feet) is almost entirely covered by impervious surfaces, including existing buildings and concrete parking lots. Based on the proposed landscape plans included in the September 2020 plan set prepared for the project, the proposed project would reduce the total area of impervious surfaces to approximately 30,000 square feet.. In addition, the project would be required to comply with Provision C.3 of the MRP, which promotes infiltration. Implementation of LID measures, including the proposed bioretention basins, would increase absorption of stormwater runoff and the potential for groundwater recharge. Therefore, the proposed project would not result in a net deficit in aquifer volume or a lowering of the groundwater table. Impacts would be less than significant and further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

- c.(i) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?*
- c.(ii) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?*
- c.(iii) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?*
- c.(iv) *Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?*

The area surrounding the project site is urbanized and largely consists of impervious surfaces, including structures, parking lots, and roadways. Stormwater runoff generated by the proposed

project would be collected by drainage inlets and conduits and conveyed to the San Francisco Bay, as under current conditions. A culverted portion of Strawberry Creek is approximately 0.4 miles north of the project site; the creek does not flow through or adjacent to the site. In addition, an historic trace and unprotected portion of Potter Creek is located approximately 0.15 miles west of the site; the creek does not flow through or adjacent to the site. Existing development between the project site and the creeks includes roadways and commercial and residential developments. Project construction would not alter the course of the creeks or any other streams or rivers.

The proposed project would involve alteration of the drainage pattern within the project site, but such alteration would not result in substantial adverse effects. As described under question (b) above, the project site (41,736 square feet) is almost entirely covered by impervious surfaces, and the proposed project would reduce the total area of impervious surfaces to approximately 30,000 square feet. Therefore, the project would not introduce new impermeable areas such that the rate or amount of surface runoff would increase in a manner which would result in substantial erosion or siltation or flooding on or off the project site. In addition, the project would involve installation of bioretention treatment basins and flow-through planters in the landscaped areas throughout the site; these features would increase infiltration and treatment of stormwater within the site.

As described under question (a), the project would be subject to the requirements of the MRP, including treatment of runoff and implementation of site design measures to reduce runoff. In order to comply with the MRP, the project applicant would also be required to prepare a Stormwater Management Plan (SWMP) that includes the post-construction BMPs that control pollutant levels. The SWMP for the proposed project would be reviewed by the City of Berkeley prior to the issuance of building permits to ensure that the project would not exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Compliance with applicable state and local regulations and standards would reduce stormwater runoff from construction and operation of the proposed project to the extent practicable.

Given the information described above, the proposed project would not substantially alter the existing drainage pattern of the site or area or alter the course of any stream or river, would not result in erosion or siltation, and would not substantially increase the rate of surface runoff in a manner which would result in flooding on- or off-site or exceed capacity of a stormwater system. Impacts would be less than significant, and further analysis in an EIR is unwarranted.

#### **LESS THAN SIGNIFICANT IMPACT**

*d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?*

The project site is located approximately 1.6 miles from the San Francisco Bay and approximately 15 miles from the coast of the Pacific Ocean. The site is not located within a FEMA designated flood hazard area. The site is also not located in a dam or tsunami inundation area and is not located near a large water body or in proximity to the San Francisco Bay such that a seiche could affect the proposed project (City of Berkeley 2001a). Therefore, the project would not result in the placement of housing and other structures within FEMA-designated flood hazard areas, would not impede or redirect flood flows, would not expose people or structures to significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam, and would not result in inundation by seiche, tsunami, or mudflow. Impacts would be less than significant and further analysis in an EIR is unwarranted.

#### **LESS THAN SIGNIFICANT IMPACT**

- e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?*

As described in the *Regulatory Setting* section above, Berkeley is under the jurisdiction of the SFBRWQCB, which is responsible for preparing the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan designates beneficial uses of water in the region and establishes narrative and numerical water quality objectives. The Basin Plan serves as the basis for the San Francisco Bay RWQCB's regulatory programs and incorporates an implementation plan for achieving water quality objectives. As discussed under questions (a) and (b) above, the project would not use groundwater, violate water quality standards, or degrade water quality during construction or operation. Therefore, the proposed project would not interfere with the objectives and goals in the Basin Plan. Impacts would be less than significant and further analysis of this issue in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

# 10 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*a. Would the project physically divide an established community?*

The proposed project would involve merging seven contiguous parcels within one block into two, and development of new and renovation of existing residential buildings within the two new parcels. The project would not separate connected neighborhoods or land uses from each other. No new roads, linear infrastructure, or other development features are proposed that would divide an established community or limit movement, travel, or social interaction between established land uses. No impacts would occur, and further analysis of this issue in an EIR is not warranted.

**NO IMPACT**

*b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?*

## Consistency with General Plan

The project site is designated as High Density Residential (HDR) in the 2003 City of Berkeley General Plan. The General Plan characterizes the HDR designation as including “large, multi-family structures” and includes the following “appropriate uses:” residential, community service, schools, institutional, recreational uses, open space. The proposed project would involve renovation of existing residential uses and construction of new residential uses. Therefore, the project would be consistent with the uses intended for the HDR designation.

The City’s General Plan identifies goals policies to guide land use patterns to strategically accommodate future growth while preserving and enhancing the city as a whole. The proposed project’s consistency with selected applicable City of Berkeley goals and policies is described in Table 17.

**Table 17 General Plan Consistency**

General Plan Goal or Policy	Proposed Project Consistency
<b>LU-3 Infill Development.</b> Encourage infill development that is architecturally and environmentally sensitive, embodies principles of sustainable planning and construction, and is compatible with neighboring land uses and architectural design and scale.	<b>Consistent.</b> The proposed project would be an infill development that would replace several underutilized commercial properties with high-density residential buildings. The development would be consistent with the recent development pattern in the neighborhood and its design would be sensitive to the scale of neighboring buildings.
<b>H-33 Regional Housing Needs.</b> Encourage housing production adequate to meet the housing production goals established by ABAG's Regional Housing Needs Determination for Berkeley.	<b>Consistent.</b> The project would increase the housing supply in the City of Berkeley by 168 units.
<b>LU-7 Neighborhood Quality of Life, Action A.</b> Require that new development be consistent with zoning standards and compatible with the scale, historic character, and surrounding uses in the area.	<b>Consistent.</b> As described below, the project would be consistent with applicable zoning standards in the Berkeley Municipal Code.
<b>Policy H-12 Transit-Oriented New Construction.</b> Encourage construction of new medium- and high-density housing on major transit corridors and in proximity to transit stations consistent with zoning, applicable area plans, design review guidelines, and the Climate Action Plan.	<b>Consistent.</b> The project would involve construction of a high-density residential development in an area that is within walking distance of public transit, including bus routes that service the downtown area and the Downtown Berkeley BART station.
<b>Policy H-30 Energy Efficiency and Waste Reduction.</b> Implement provisions of Berkeley's Climate Action Plan to improve building comfort and safety, reduce energy costs, provide quality housing, and reduce Greenhouse Gas Emissions.	<b>Consistent.</b> As described in Section 7, <i>Greenhouse Gas Emissions</i> , the proposed project would be consistent with the City's Climate Action Plan as well as regional and state goals to reduce GHG Emissions. The proposed project would be required to be constructed in accordance with the latest iteration of CALGreen and the California Building Energy Efficiency Standards, which include green building practices. In addition, the new buildings proposed at the southern portion of the site would be fully electric per the requirements of Berkeley Municipal Code Section 12.80, which would reduce GHG emissions associated with energy usage. As described in the <i>Description of Project</i> Section, the project would also include additional green building features, including built-in composting and recycling centers, efficient clothes washing and drying machines, and high efficiency lighting.
<b>Policy UD-33 Sustainable Design.</b> Promote environmentally sensitive and sustainable design in new buildings.	<b>Consistent.</b> As described in Section 5, <i>Energy</i> , impacts related to energy usage from construction and operation of the proposed project would be less than significant. The project would be required to comply with CALGreen and the California Building Energy Efficiency Standards, and the new buildings proposed at the southern portion of the site would be fully electric per the requirements of Berkeley Municipal Code Section 12.80. Finally, the project would also include additional green building features, including built-in composting and recycling centers, efficient clothes washing and drying machines, and high efficiency lighting.
<b>Policy EM-8 Building Reuse and Construction Waste.</b> Encourage rehabilitation and reuse of buildings whenever appropriate and feasible in order to reduce waste, conserve resources and energy, and reduce construction costs.	<b>Consistent.</b> The proposed project would involve rehabilitation of two existing residential buildings with a combined seven dwelling units.

General Plan Goal or Policy	Proposed Project Consistency
<b>Policy EM-28 Natural Habitat.</b> Restore and protect valuable, significant, or unique natural habitat areas.	<b>Consistent.</b> As described in Section 3, <i>Biological Resources</i> , the project would not result in significant impacts to biological resources, including natural habitats.
<b>Policy EM-43 Noise Reduction.</b> Reduce significant noise levels and minimize new sources of noise.	<b>Consistent.</b> As described in Section 12, <i>Noise</i> , noise associated with the proposed project would not result in a significant change in existing noise levels at the project site or surrounding neighborhood.
Source: City of Berkeley 2003	

The proposed project would be consistent with the General Plan policies listed above as well as the site's General Plan land use designation. Impacts related to General Plan consistency would be less than significant.

## Consistency with Berkeley Municipal Code

The project site is in the Multi-Family Residential Zoning District (R-4), which allows a variety of commercial and residential uses, including single-family, duplex, and multi-family residences, senior housing, hotels, and schools. As a multi-family residential development, the project is therefore consistent with the permitted uses in the R-4 zoning district.

The project would also be subject to the following discretionary approvals by the City of Berkeley:

- Use Permit under BMC Section 23C.08.050.C to demolish two existing nonresidential buildings that are over 40 years old.
- Use Permits under BMC Section 23C.08.010.B to demolish two existing dwelling units.
- Use Permit under BMC Section 23C.08.020 to demolish a duplex constructed prior to June 1980.3
- Use Permits under BMC Section 23D.40.030 to construct two new multi-family residential buildings.
- Use Permit under BMC Section 23D.40.070.C to construct a new main building that exceeds 35' in average height and three stories.
- Administrative Use Permit under Section 23D.12.060 to allow a Joint Use Parking Agreement for parking spaces required for the units at 2012 and 2020 Dwight Way during the construction of the subterranean garage.

All requested use permits for the project would be subject to review and approval by the Berkeley Zoning Adjustments Board (ZAB). In order to approve such permits, the ZAB must make specific findings, including that the project is consistent with applicable zoning and General Plan regulations. The Board would also be required to find that the project would "not be detrimental to the health, safety, peace, morals, comfort or general welfare of persons residing or working in the area or neighborhood of such proposed use or be detrimental or injurious to property and improvements of the adjacent properties, the surrounding area or neighborhood or to the general welfare of the City" (BMC Section 23B.32,040.B).

In addition, the project applicant is requesting a State Density Bonus, subject to California Government Code Sections 65915-65918 and BMC Chapter 23C.14. Because the project would provide nine very low income (VLI) units, it is entitled a 35 percent increase in density above the maximum allowable density in the R-4 District. The State Density Bonus Law also allows waivers of



development standards to accommodate the density bonus dwelling units. In this case, the project would employ waivers to exceed maximum height and lot coverage and to reduce minimum yard setbacks, useable open space, and parking requirements.

With approval of the above use permits, the proposed project would be consistent with applicable zoning regulations in the BMC. Further analysis of this issue in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

# 11 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?*
- b. *Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?*

The project site is within an urbanized area with no current oil or gas extraction. According to the Environmental Management Element of the City's General Plan, Berkeley does not contain mineral deposits of regional significance (City of Berkeley 2001b). Therefore, no mineral resource activities would be altered or displaced by the proposed project and further analysis of this issue in an EIR is not warranted.

**NO IMPACT**

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## 12 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

### Fundamentals of Noise

The unit of measurement used to describe a noise level is the decibel (dB). However, the human ear is not equally sensitive to all frequencies within the sound spectrum. Therefore, a method called “A-weighting” is used to filter noise frequencies that are not audible to the human ear. A-weighting approximates the frequency response of the average young ear when listening to most ordinary everyday sounds. When people make relative judgments of the loudness or annoyance of a sound, their judgments correlate well with the “A-weighted” levels of those sounds. Therefore, the A-weighted noise scale is used for measurements and standards involving the human perception of noise. In this analysis, all noise levels are A-weighted, and the abbreviation “dBA” is understood to identify the A weighted decibel.

Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used for earthquake magnitudes. A 10 dB increase represents a 10-fold increase in sound intensity, a 20 dB increase is a 100-fold intensity increase, a 30 dB increase is a 1,000-fold intensity increase, etc. Similarly, a doubling of a noise source, such as doubling of traffic volume, would increase the noise level by 3 dB; a halving of the noise source would result in a 3 dB decrease.

Human perception of noise has no simple correlation with acoustical energy. The perception of noise is not linear in terms of dBA or in terms of acoustical energy. Two equivalent noise sources combined do not sound twice as loud as one source. It is widely accepted that the average healthy ear can barely perceive changes of 3 dBA (increase or decrease); that a change of 5 dBA is readily

perceptible; and that an increase or decrease of 10 dBA sounds twice (half) as loud (California Department of Transportation [Caltrans] 2013a).

### *Descriptors*

The impact of noise is not a function of loudness alone. The time of day when noise occurs and the duration of the noise are also important. In addition, most noise that lasts for more than a few seconds is variable in its intensity. Consequently, a variety of noise descriptors has been developed. The noise descriptors used for this analysis are the one-hour equivalent noise level ( $L_{eq}$ ) and the community noise equivalent level (CNEL).

The  $L_{eq}$  is the level of a steady sound that, in a specific time period and at a specific location, has the same A-weighted sound energy as the time-varying sound. For example,  $L_{eq(1h)}$  is the equivalent noise level over a 1-hour period and  $L_{eq(8h)}$  is the equivalent noise level over an 8-hour period.  $L_{eq(1h)}$  is a common metric for limiting nuisance noise, whereas  $L_{eq(8h)}$  is a common metric for evaluating construction noise.

The CNEL is a 24-hour equivalent sound level. The CNEL calculation applies an additional 5 dBA penalty to noise occurring during evening hours (between 7:00 p.m. and 10:00 p.m.) and an additional 10 dBA penalty to noise occurring during the night (between 10:00 p.m. and 7:00 a.m.). These increases for certain times are intended to account for the added sensitivity of humans to noise during the evening and night.

### *Propagation*

Sound from a small, localized source (approximating a “point” source) radiates uniformly outward as it travels away from the source in a spherical pattern, known as geometric spreading. The sound level decreases or drops off at a rate of 6 dBA for each doubling of distance.

Traffic noise is not a single, stationary point source of sound. Over some time interval, the movement of vehicles makes the source of the sound appear to emanate from a line (line source) rather than a point. The drop-off rate for a line source is 3 dBA for each doubling of distance.

## **Vibration**

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a vibrating object describes how rapidly it oscillates. The normal frequency range of most groundborne vibration that can be felt by the human body starts from a low frequency of less than 1 Hz and goes to a high of about 200 Hz (Crocker 2007).

While people have varying sensitivities to vibrations at different frequencies, in general they are most sensitive to low-frequency vibration. Vibration in buildings, such as from nearby construction activities, may cause windows, items on shelves, and pictures on walls to rattle. Vibration of building components can also take the form of an audible low-frequency rumbling noise, referred to as groundborne noise. Groundborne noise is usually only a problem when the originating vibration spectrum is dominated by frequencies in the upper end of the range (60 to 200 Hz), or when foundations or utilities, such as sewer and water pipes, physically connect the structure and the vibration source (Federal Transit Administration [FTA] 2018). Although groundborne vibration is sometimes noticeable in outdoor environments, it is almost never annoying to people who are

outdoors. The primary concern from vibration is that it can be intrusive and annoying to building occupants and vibration-sensitive land uses.

Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2013b). When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or RMS vibration velocity. The PPV and RMS velocity are normally described in inches per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2013b).

Caltrans has published applicable guidelines for vibration annoyance caused by transient and intermittent sources, as shown in Table 18.

**Table 18 Caltrans Criteria for Vibration Annoyance**

Human Response	Maximum PPV (in/sec)	
	Transient Sources <sup>1</sup>	Continuous/Frequent Intermittent Sources <sup>1</sup>
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.9	0.10
Severe	2.0	0.4

<sup>1</sup> Caltrans defines transient sources as those that create a single isolated vibration event, such as blasting or drop balls. Continuous/frequent intermittent sources can include impact pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.  
Source: Caltrans 2013b

In addition, Caltrans has published guidelines for structural damage from vibration, as shown in Table 19.

**Table 19 Caltrans Criteria for Vibration Damage**

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5

Source: Caltrans 2013b

## Regulatory Setting

### *Berkeley Municipal Code*

Section 13.40, Community Noise, of the Berkeley Municipal Code sets the City's standards for on-site operational noise and construction noise. As shown in Table 20, Section 13.40.050, Exterior Noise Standards, provides the exterior noise limits not to be exceeded for more than 30 minutes in any hour in various zoning districts. If the measured ambient noise level exceeds these limits, the allowable noise exposure standard would be the ambient noise level.

**Table 20 City of Berkeley Exterior Noise Limits**

Zone	Time Period	L <sub>50</sub> <sup>1</sup> Noise Level, dBA
R-1, R-2	7:00 AM – 10:00 PM	55
	10:00 PM – 7:00 AM	45
R-3 and Above	7:00 AM – 10:00 PM	60
	10:00 PM – 7:00 AM	55
Commercial	7:00 AM – 10:00 PM	65
	10:00 PM – 7:00 AM	60
Industry	Anytime	70

<sup>1</sup>L<sub>50</sub> is the noise level that cannot be exceeded for more than 30 minutes in any hour.

Source: Berkeley, Municipal Code Section 13.40.050

Section 13.40.060 of the Berkeley Municipal Code, Interior Noise Standards, sets interior noise limits for multi-residential as shown in Table 21.

**Table 21 City of Berkeley Interior Noise Limits**

Zone	Time Period	Noise Level, dBA (Leq)
All	7:00 AM – 10:00 PM	45
	10:00 PM – 7:00 AM	40

Source: City of Berkeley Municipal Code Section 13.40.060

Section 13.40.070 of the Municipal Code sets standards for construction noise. This section prohibits construction activity between the hours of 7:00 PM and 7:00 AM on weekdays, 8:00 PM to 9:00 AM on weekends and holidays such that the resulting noise creates a noise disturbance across a residential or commercial property line. Table 22 lists the City's maximum sound levels for mobile and stationary equipment that apply to construction activity "where technically and economically feasible" during permitted hours of construction (Section 13.40.070.B of the Municipal Code).

**Table 22 Construction Noise Standards**

Equipment Type	Day/Times	Residential (R-1, R-2)	Multi-Family Residential (R-3, R-4)	Commercial/Industrial
Mobile <sup>1</sup>	Weekdays 7:00 AM to 7:00 PM	75 dBA	80 dBA	85 dBA
	Weekends and Holidays 9:00 AM to 8:00 PM	60 dBA	65 dBA	70 dBA
Stationary <sup>2</sup>	Weekdays 7:00 AM to 7:00 PM	60 dBA	65 dBA	70 dBA
	Weekends and Holidays 9:00 AM to 8:00 PM	50 dBA	55 dBA	60 dBA

<sup>1</sup> Section 13.40.070 of the Berkeley Municipal Code defines mobile equipment as “nonscheduled, intermittent, short-term operation (less than 10 days).”

<sup>2</sup> Section 13.40.070 of the Berkeley Municipal Code defines stationary equipment as “repetitively scheduled” and for “relatively long term operation (period of 10 days or more).”

Source: adapted from Table 13.40-3 and Table 13.40-4 of the City of Berkeley’s Construction Noise Standards:  
[http://www.ci.berkeley.ca.us/uploadedFiles/Health\\_Human\\_Services/Level\\_3\\_-\\_General/Construction%20Noise%20Standard.pdf](http://www.ci.berkeley.ca.us/uploadedFiles/Health_Human_Services/Level_3_-_General/Construction%20Noise%20Standard.pdf)

## Existing Setting

The acoustic environment on and near the project site is dominated by noises typical of residential and commercial neighborhoods, including vehicular traffic, pedestrian conversations, and doors slamming. The primary noise source in the surrounding area is vehicle traffic. In addition, construction associated with the project at 2029 Blake Street is a current temporary noise source.

On September 10, 2020, Rincon Consultants, Inc. performed three 15-minute weekday noise measurements using an ANSI Type II integrating sound level meter. The measurements were taken during a.m. (morning) peak hours on a weekday, and Table 23 summarizes the results of the measurements. The primary noise source was vehicle traffic, and secondary noise sources included construction activities at 2029 Blake Street and an idling delivery truck. The loudest noise measurement was along Milvia Street near the western portion of the site. Because the noise measurements were taken during the Alameda County Shelter-in-Place order due to the COVID-19 pandemic, it is likely that traffic volumes were artificially low compared to typical conditions. Lighter traffic conditions also likely contributed to artificially low ambient noise levels during the time the measurements were taken. For example, since Berkeley High School is currently closed, typical morning traffic associated with student drop-offs on Milvia Street did not occur during the noise measurements. However, these baseline ambient noise conditions would not affect the assessment of the project’s operational noise impacts, which depend on the City’s exterior noise standards shown in Table 20. Figure 9 shows the noise measurement locations.



Figure 9 Noise Measurement Locations



Imagery provided by Microsoft Bing and its licensors © 2020.

Fig. 9 Noise Measurement Locations

**Table 23 Noise Measurement Results**

#	Measurement Location	Sample Time	Primary Noise Source	L <sub>eq</sub> [15] (dBA) <sup>1</sup>
1	Blake Street, near southeast corner of project site	7:02 a.m. – 7:17 a.m.	Vehicles on Blake Street	54.4
2	Milvia Street, between Blake Street and Dwight Way	7:27 a.m. – 7:42 a.m.	Vehicles on Milvia Street, Blake Street, and Dwight Way	61.4
3	Northern portion of the project site, between 2012 and 2020 Dwight Way	7:45 a.m. – 8:00 a.m.	Vehicles on Dwight Way	56.7

See Figure 9 for a map of the noise measurement locations.

<sup>1</sup> The equivalent noise level (L<sub>eq</sub>) is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). For this measurement, the L<sub>eq</sub> was over a 15-minute period (L<sub>eq</sub> [15]).

Source: Rincon Consultants, field measurements conducted on September 10, 2020, using ANSI Type II Integrating sound level meter. See Appendix NOI for noise measurement results.

## Sensitive Receptors

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. Noise-sensitive receptors generally include single- and multi-family residences, hotels, motels, schools, libraries, places of worship, hospitals, and nursing homes. The predominant noise-sensitive land uses in the project vicinity are the existing residences located on the site (including those that would be preserved and relocated), residences immediately adjacent to the site to the east and south, and the medical offices adjacent to the site to the west and north. The nearest sensitive receptors are the multi-family residences proposed to be relocated and renovated on the north portion of the project site at 2012 and 2020 Dwight Way. In addition, a mixed-use building with residential units is currently under construction adjacent to the project site, at 2029 Blake Street. Future residences at this building would be sensitive receptors.

## Impact Analysis

- a. *Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

The proposed project would generate temporary noise increases during construction and long-term increases associated with project operation; however, as discussed below, both construction-related and operational noise impacts would be less than significant or less than significant with mitigation incorporated.

### Construction Noise

Construction noise was estimated using the Roadway Construction Noise Model (RCNM) provided by the Federal Highway Administration (FHWA). RCNM predicts equivalent construction noise levels over time from the operation of certain equipment and usage rates for the equipment, based on empirical data and the application of acoustical propagation formulas. The construction equipment list provided by the project applicant was used in RCNM. Noise was modeled based on the project's anticipated construction equipment for each phase and distance to nearby receptors.

As described above in the *Description of the Project*, the relocated and renovated buildings at 2012 and 2020 Dwight Way could be occupied during construction of the two new buildings at the southern portion of the site (2001 and 2015 Blake Street). Therefore, construction activity could intermittently occur as close as ten feet from these nearest sensitive receptors. This analysis assumes that on average the center of construction activity would occur approximately 100 feet from the relocated buildings on the project site because RCNM estimates equivalent noise levels over time, and construction equipment would not constantly operate next to the existing residences. In addition, equipment is typically dispersed in various areas of the site, with only a limited amount of equipment operating near a given location at a particular time. Therefore, this analysis of construction noise impacts is conservative.

Table 24 identifies the average expected noise levels at the relocated on site residential building based on the combined use of construction equipment anticipated to be used concurrently during each phase of construction. In addition, Table 24 provides the average expected noise levels at the nearest sensitive receptor in a commercial zoning district (2029 Blake Street), which is also approximately 100 feet from the expected center of construction activity.

**Table 24 Estimated Noise Levels by Construction Phase**

Construction Phase	Equipment	Estimated Noise (dBA L <sub>eq</sub> ) at 100 feet
Demolition	Concrete saws, tractor	80
Site Preparation	Grader, dozer, roller, tractor	80
Grading	Grader, excavator, dozer, tractor, compactor	81
Building Construction	Generator, tractor, lift, crane, drill rig truck, compactor	79
Paving	Cement mixers, paver, roller, paving equipment	74
Architectural Coating	Air compressors	68

Source: Roadway Construction Noise Model. See Appendix NOI for equipment noise impact data sheets.

As shown in Table 24, construction noise could be as high as approximately 81 dBA L<sub>eq</sub> at existing and future residential receptors that would be located approximately 100 feet from the center of construction activity. Such levels would exceed existing ambient noise levels and would be audible at adjacent buildings, including the relocated residences at the north portion of the site. As shown above in Table 23, the existing ambient noise level during peak-hour traffic was measured at 61 dBA L<sub>eq</sub>. Therefore, construction noise could be up to 20 dBA L<sub>eq</sub> louder than existing levels at sensitive receptors, without implementation of noise reduction measures.

As described above in the *Regulatory Setting* section, the BMC limits the hours of construction to the less sensitive hours of the day (7:00 a.m. – 7:00 p.m. weekdays, 9:00 a.m. – 8:00 p.m. weekends and holidays). Therefore, construction would not occur during normal sleeping hours for residents, which are the most sensitive time for exposure to noise. This section also states that during the construction period, where technically and economically feasible, construction activities shall be conducted in such a manner that the maximum sound levels from stationary equipment at affected properties will not exceed 65 dBA L<sub>eq</sub> on weekdays and 55 dBA L<sub>eq</sub> on weekends and holidays in the R-4 zoning district, and 70 dBA L<sub>eq</sub> on weekdays and 60 dBA L<sub>eq</sub> on weekends and holidays in commercial districts. As shown in Table 24, it is anticipated that noise from construction of the proposed project would exceed these limits without implementation of noise reduction measures.

However, the following City of Berkeley Standard Conditions of Approval would apply to construction activities, requiring reduced construction hours in residential zoning districts and additional measures that would reduce construction noise from the levels estimated in Table 24:

Construction Hours. Construction activity shall be limited to between the hours of 8:00 AM and 6:00 PM on Monday through Friday, and between 9:00 AM and Noon on Saturday. No construction-related activity shall occur on Sunday or any Federal Holiday.

Construction Noise Reduction Program. The applicant shall develop a site-specific noise reduction program prepared by a qualified acoustical consultant to reduce construction noise impacts to the maximum extent feasible, subject to review and approval of the Zoning Officer. The noise reduction program shall include the time limits for construction listed above, as measures needed to ensure that construction complies with BMC Section 13.40.070. The noise reduction program should include, but shall not be limited to, the following available controls to reduce construction noise levels as low as practical:

- A. Construction equipment should be well maintained and used judiciously to be as quiet as practical.
- B. Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.
- C. Utilize “quiet” models of air compressors and other stationary noise sources where technology exists. Select hydraulically or electrically powered equipment and avoid pneumatically powered equipment where feasible.
- D. Locate stationary noise-generating equipment as far as possible from sensitive receptors when adjoining construction sites. Construct temporary noise barriers or partial enclosures to acoustically shield such equipment where feasible.
- E. Prohibit unnecessary idling of internal combustion engines.
- F. If impact pile driving is required, pre-drill foundation pile holes to minimize the number of impacts required to seat the pile.
- G. Construct solid plywood fences around construction sites adjacent to operational business, residences or other noise-sensitive land uses where the noise control plan analysis determines that a barrier would be effective at reducing noise.
- H. Erect temporary noise control blanket barriers, if necessary, along building facades facing construction sites. This mitigation would only be necessary if conflicts occurred which were irresolvable by proper scheduling. Noise control blanket barriers can be rented and quickly erected.
- I. Route construction related traffic along major roadways and away from sensitive receptors where feasible.

Adherence to the above Conditions of Approval would ensure that construction noise occurs within more reduced hours than specified in the BMC and that that noise levels would be reduced to the maximum extent feasible, as required by BMC Section 13.40.070. In addition, construction activities associated with the project would be temporary and consistent with typical construction projects in an urban area such as the project site; no unusually loud demolition or construction equipment, such as pile drivers, would be used. Therefore, the project would have a less than significant impact from temporary construction noise, and further analysis in an EIR is unwarranted.

### *Operational Noise*

Operation of the proposed project would generate noise associated with the outdoor open space and roof deck areas, mechanical equipment, project-generated traffic, and mail delivery and trash/recycling trucks. These are discussed in detail below.

#### **OUTDOOR OPEN SPACE AND ROOF DECK**

Operation of the project would involve residential use of the outdoor open space areas and rooftop deck, which would include gardens, gathering spaces, and other landscaped areas. Noise-generating activities typical of these outdoor activity areas are gatherings and general conversation.

Conversational noise was estimated based on noise levels from a certified EIR for the Palladium Residences Project in Los Angeles. The noise level of 20 people talking simultaneously was estimated at 63 dBA  $L_{eq}$  at receptors three feet away (City of Los Angeles 2014). The outdoor recreational areas would be located as close as approximately 15 feet from the nearest sensitive receptors, the residences to the southeast of the property, where the existing ambient noise level is approximately 55 dBA  $L_{eq}$  during peak-hour traffic. At this distance, noise from human conversations would decrease to an estimated 51 dBA  $L_{eq}$ , (based on attenuation of 6 dBA per doubling of distance). Therefore, noise from the outdoor recreation areas would not exceed the exterior noise limits for properties in the R-4 District in BMC 13.40.050, 55 dBA  $L_{50}$  during the nighttime and 60 dBA  $L_{50}$  during daytime. Impacts of noise at the outdoor open space and roof deck areas would therefore be less than significant. Further analysis in an EIR is unwarranted.

#### **MECHANICAL EQUIPMENT**

Based on the proposed roof plans, mechanical equipment would be installed at the center of the rooftops of both new buildings at 2015 and 2001 Blake Street (no rooftop mechanical equipment is proposed at the existing buildings at 2012 and 2020 Dwight Way). Rooftop-mounted HVAC equipment could be located as close as approximately 50 feet from the residential buildings that abut the project site to the southeast (accounting for both horizontal and vertical distance from the residences to the rooftop level on-site). Typical residential HVAC units are anticipated to generate noise levels ranging from 50 to 60 dBA  $L_{eq}$  at a distance of 50 feet from the source, if unshielded by equipment enclosures (Illingworth & Rodkin 2019). This estimate is conservative because it does not account for the shielding effect of equipment enclosures or rooftop parapets, which could block line of sight between the source and noise-sensitive receptors, reducing noise levels by at least 10 dBA.

At a distance of 50 feet to the nearest sensitive receptor, it is estimated that HVAC units would generate a noise level of up to 60 dBA  $L_{eq}$  during both daytime and nighttime hours. Even without accounting for shielding by enclosures or parapets, estimated HVAC noise would not exceed the exterior daytime noise limit of 60 dBA. However, HVAC noise could exceed the nighttime noise limit of 55 dBA.

The project would be subject to the following City of Berkeley standard Condition of Approval related to HVAC noise reduction:

**HVAC Noise Reduction Measures.** Prior to the issuance of building permits, the project applicant shall submit plans that show the location, type, and design of proposed heating, ventilation, and cooling (HVAC) equipment. In addition, the applicant shall provide product specification sheets or a report from a qualified acoustical consultant showing that operation of the proposed HVAC equipment will meet the City's exterior noise requirements in BMC Section 13.40.050. The City's Planning and Development Department shall review

the submitted plans, including the selected HVAC equipment, to verify compliance with exterior noise standards.

The implementation of the above condition of approval below would reduce impacts related to HVAC equipment noise to a less than significant level by requiring the project applicant to locate, select, and design HVAC equipment that meets the City's exterior noise standards. Further analysis in an EIR is not warranted.

#### *Off-Site Traffic Noise*

The proposed project would generate new vehicle trips and incrementally increase traffic on area roadways, which would increase roadway noise at nearby residences to the northeast and west. As discussed in Section 16, *Transportation*, the proposed project would generate an estimated 612 daily vehicle trips. To determine existing traffic volumes along area roadways, a traffic count was taken along Dwight Way at the location of NM 3 over a 15-minute interval. During the 15-minute interval at NM 3, 51 vehicles were counted. Traffic numbers were multiplied by four to obtain an approximate hourly traffic volume of 204 vehicles along Dwight Way. Because hourly traffic is equivalent to approximately 10 percent of daily traffic, the daily traffic volume along Dwight Way was estimated at approximately 2,040 vehicles.

The proposed project's contribution to roadway noise was evaluated through a calculation by comparing existing traffic noise levels with operation of the project. Generally, a doubling of traffic (i.e., a 100 percent increase in traffic volume) would increase noise levels by approximately 3 dBA, which is the human level of perception for an increase in noise (FTA 2018). By contrast, modeling of traffic noise indicates that a 10 percent increase in traffic volume would raise traffic noise by approximately 0.4 dBA, a 20 percent increase would raise traffic noise by about 0.8 dBA, and a 30 percent increase would result in an approximately 1.1 dBA increase in traffic noise. The 612 daily trips added by the project would constitute a 30 percent increase in traffic volume along Dwight Way, resulting in a noise increase of approximately 1.1 dBA. Such an increase would be imperceptible and would not result in a substantial permanent increase in ambient noise levels. Traffic noise would be less than significant. Further analysis in an EIR is unwarranted.

#### *Mail Delivery and Trash/Recycling Trucks*

Noise from delivery trucks and trash/recycling hauling trucks serving the project site would generate periodic noise in the program area. Mail delivery and trash/recycling hauling trucks would access the site primarily via Blake Street, near the main entrance, driveway, and mail room for the new buildings at 2001 and 2015 Blake Street, and Dwight Way, near the entrance for the relocated buildings at 2012 and 2020 Dwight Way. Both mail delivery and trash hauling trucks would periodically idle on streets while performing duties. The average noise level for a single idling truck is estimated at 80 dBA  $L_{eq}$  at a distance of 10 feet (BridgeNet 2008). Garbage trucks have been measured at 65 dBA  $L_{eq}$  at a distance of 50 feet while idling and up to 80 to 90 dBA while emptying dumpsters (DSA Engineers 2003). However, estimated noise from idling trucks would not be substantially louder or occur more frequently than under existing conditions, as idling trucks including trash/recycling-hauling trucks, currently serve the existing businesses within the project site. As such, noise from delivery and trash trucks would be consistent with existing noise levels and would have a less than significant impact on sensitive receptors. Further analysis in an EIR is unwarranted.

#### **LESS THAN SIGNIFICANT IMPACT**



- b. *Would the project result in generation of excessive groundborne vibration or groundborne noise levels?*

Construction of the proposed project would intermittently generate vibration on and adjacent to the project site. Vibration-generating equipment may include bulldozers and loaded trucks to move materials and debris, and vibratory rollers for paving. It is assumed that pile drivers, which generate strong groundborne vibration, would not be used during construction. Vibration-generating equipment on the project site would be used as close as approximately 25 feet from the nearest sensitive receptors, the existing residential buildings at the northern portion of the project site, 2012 and 2020 Dwight Way.

Unlike construction noise, vibration levels are not averaged over time to determine their impact. The most important factors are the maximum vibration level and the frequency of vibratory activity. Therefore, it is appropriate to estimate vibration levels at the nearest distance to sensitive receptors that equipment could be used, even though this equipment would typically be located farther from receptors. This analysis assumes that vibration-generating equipment could be located as close as 25 feet from sensitive receptors adjacent to construction at the project site, which is the reference distance for vibration levels provide by Caltrans. Table 25 estimates vibration levels from equipment at this distance.

**Table 25 Vibration Levels for Construction Equipment at Noise-Sensitive Receptors**

Equipment	PPV (in/sec) 25 feet
Vibratory Roller	0.210
Large Bulldozer	0.089
Loaded Trucks	0.076
Jackhammer	0.035
Source: Caltrans 2013b	

As shown in Table 25, construction activity would generate vibration levels reaching an estimated 0.210 PPV at a distance of 25 feet, if vibratory rollers are used to pave asphalt. Vibration-generating equipment would be operated on a transient basis during construction.

A maximum vibration level of 0.210 PPV during the potential use of vibratory rollers would not exceed 0.25 PPV, Caltrans' recommended criterion for distinctly perceptible vibration from transient sources. Construction activity that generates loud noises (and therefore vibration) also would be limited to daytime hours on weekdays and Saturdays, which would prevent the exposure of sensitive receptors to vibration during evening and nighttime hours. As a result, it would not result in substantial annoyance to people of normal sensitivity. In addition, the vibration level would not exceed the Caltrans' recommended criterion of 0.5 PPV for potential damage of historic and old buildings from transient vibration sources. Therefore, the impacts of vibration on people and structures would be less than significant.

As a residential development, the proposed project would not generate significant stationary sources of vibration after construction, such as manufacturing or heavy equipment operations. Operational vibration in the project vicinity would be generated by additional vehicular travel on local roadways; however, any increase in traffic-related vibration levels would not be perceptible because, as described in Section 16, *Transportation*, operation of the proposed project would not

substantially increase existing traffic volumes in the area. Therefore, operational vibration impacts would be less than significant. Further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

- c. *For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?*

As discussed in Section 8, *Hazards and Hazardous Materials*, the nearest airport to the project site is the Oakland International Airport, located approximately 10.5 miles southeast of the site. The project site is located entirely outside the noise contours associated with the airport (County of Alameda 2010). The proposed project would not subject people at the site to excessive noise and there would be no impact. Further analysis in an EIR is not warranted.

**NO IMPACT**



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# 13 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

- a. *Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?*

As described in *Description of Project*, the project would involve retention of seven existing dwelling units, which would be located and renovated within the project site. In addition, the project would involve construction of two new buildings with a total of 161 new residential units; therefore, the project would directly generate population growth. The Department of Finance (DOF) calculates a per-person household rate of 2.28 for the City of Berkeley (DOF 2019); based on this rate, the project would include 383 total residents, including the residents of the existing relocated buildings. Given the net increase in dwelling units at the project site, the project would add an estimated net 368 new residents to the City population. The current population of Berkeley is estimated at 123,328 (DOF 2019). The addition of new residents from operation of the proposed project would therefore increase the population of the City of Berkeley to 123,696. ABAG estimates that the City's population will increase to 131,005 by 2025, an increase of 7,677 residents (ABAG 2017). The population increase associated with the proposed project would therefore be within ABAG's population forecast for the City.

The city also currently has 51,179 housing units (DOF 2019). The addition of 161 units would bring the total number of housing units to 51,340. The latest ABAG projections also estimate that the number of housing units in the city in 2025 will be 53,475 (ABAG 2017), an increase of 2,296 units. The housing growth associated with the project is thus within ABAG projections. Given the number of new units within the project, the proposed project would not substantially induce unplanned population growth through the provision of new housing units. Impacts would be less than significant and further analysis in an EIR is not warranted.

## LESS THAN SIGNIFICANT IMPACT

- b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?*

The project would involve demolition of the existing building at 2001 Blake Street, which is a permitted residential duplex. However, the building is currently used as a medical office and has not been used for housing in several years. The project would also involve rehabilitation of seven existing dwelling units and would therefore preserve all other existing housing at the project site. (As described in the *Description of Project* during rehabilitation activities, the residents of the existing units would be provided temporary housing in the neighborhood.) Moreover, the project would involve construction of 161 new housing units, which would more than replace the number of units that would be demolished. Therefore, the project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Impacts would be less than significant and further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

## 14 Public Services

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
1 Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2 Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3 Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4 Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5 Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Setting

#### *Fire Protection*

The Berkeley Fire Department (BFD) provides fire protection and emergency medical services to the project site, as well as for the entire city of Berkeley. The Fire Department provides fire suppression, paramedic ambulance service, search and rescue, fire prevention inspections/permits, public fire education programs, emergency preparedness planning and other services based on community needs. BFD also reviews development projects and building permit applications for compliance with California Building Code Requirements and other regulations intended to prevent or reduce fire hazards. The proposed project would be required to adhere to the conditions of approval set forth by the BFD based on their review of the project plans. The fire station closest to the project site is at 2680 Shattuck Avenue Street, approximately 0.2 mile southeast of the project site.

#### *Police Protection*

The Berkeley Police Department (BPD) provides police protection services to the project site. Police headquarters are located at 2100 Martin Luther King Jr. Way, approximately 0.5 miles northwest of the project site.

### *Public Schools*

The Berkeley Unified School District (BUSD) operates three preschools, 11 elementary schools (grades K-5), three middle schools (grades 6-8), one large comprehensive high school (grades 9-12), a continuation high school (grades 9-12), and an adult school (BUSD 2020). The District's overall enrollment for the 2018-2019 school year was 10,194 students (Ed-Data.org 2020).

## **Impact Analysis**

- a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

Construction and operation of the proposed project would increase the demand for fire protection and emergency medical services. In addition, the increase in traffic, density, and building heights associated with the proposed project could result in response time goals not being met. However, the continued implementation of code requirements and policies in the Berkeley General Plan would improve the ability of fire protection facilities to serve future growth. Policy S-22 in the City's Disaster Preparedness and Safety Element calls for the City to provide adequately staffed and equipped Fire Stations and to pursue a response time goal of four minutes from the nearest station to all parts of Berkeley. As described in Section 13, *Population and Housing*, the project would induce population growth within the range of the forecasts for the City. Therefore, the project would not cause an increase in population beyond the forecasts the City uses to plan for emergency preparedness.

In addition, the project would be required to implement basic building design standards for residential buildings as mandated by the Berkeley Fire Code, under BMC Section 19.48 and abatement of fire-related hazards and pre-fire management prescriptions as outlined under the California Health and Safety Code and the California Fire Plan. Further, the project would be subject to Fire Department review to ensure compliance with the Fire Code and to ensure that adequate levels of service can be provided in accordance with BMC Section 19.48 and General Plan Policy S-22. Project plans were reviewed by the Deputy Fire Marshal Steven Riggs on January 22, 2020 as part of the City's Interdepartmental Roundtable Review. Fire Marshal Riggs provided information about the plans that would be required for building permit approval. Moreover, the project would be reviewed by the Fire Department again before City approval of building permits. The project would not require new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities. Impacts related to fire protection facilities associated with the proposed project would be less than significant. Further analysis in an EIR is not warranted.

### **LESS THAN SIGNIFICANT IMPACT**

- a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

The proposed project would not create excessive demand for police services or introduce development to areas outside of normal service range that would necessitate new police protection

facilities; the project site is within the BPD's service area and is currently serviced by the BPD. Moreover, as described in Section 13, *Population and Housing*, the project would induce population growth within the range of the forecasts for the City. The proposed project would thus not create the need for new or expanded police protection facilities and impacts would be less than significant. Further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

*a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?*

The project would involve construction of 161 new residential units and renovation of seven existing residential units. As an individual development project, and assuming a conservative student generation rate of one student per residential unit, the proposed project would generate up to 174 net new students at BUSD schools. Pursuant to Senate Bill 50 (Section 65995(h)), payment of mandatory fees to the affected school district would reduce potential school impacts to less than significant level under CEQA. If approved, this project would be subject to the Berkeley Unified School District School Impact Fees, which are assessed based on proposed land use and floor area. Therefore, the project would not have a significant impact with respect to schools. Further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

*a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?*

Please see Section 15, *Recreation*, for an analysis of impacts related to parks and recreation resources. Impacts were found to be less than significant. Further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

*a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?*

As discussed in Section 9, *Hydrology and Water Quality*, impacts related to stormwater facilities would be less than significant. As discussed in Section 18, *Utilities and Service Systems*, impacts related to water and wastewater water facilities would be less than significant. No significant impacts to other public services are anticipated. Impacts would be less than significant, and further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

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# 15 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## Recreation Setting

The City of Berkeley's Parks, Recreation and Waterfront Department administers recreation centers and maintains the parks, waterfront, and urban forest within the city limits. In this department, the Parks Division maintains 52 parks that include 48 play areas; 21 turf medians, triangles, and dividers; 44 parking and vacant lots; 75 paths, walks and steps; 40 undeveloped paths; and the Berkeley Marina (City of Berkeley 2001d). According to the General Plan, there are 230 acres of parkland within city limits, which is a ratio of approximately two park acres per 1,000 residents. In addition to the public open space managed by the City's Parks Divisions, the city contains parts of the Bay Trail and the 1,854-acre McLaughlin Eastshore State Park, and residents are adjacent to the East Bay Regional Park District's 2,079-acre Tilden Regional Park and 208-acre Claremont Canyon Regional Preserve. Including these additional parklands, Berkeley's park acres-to-persons ratio increases to approximately 12 acres per 1,000 residents (City of Berkeley 2001d).

Several parks and recreational areas are within walking distance of the project site. The public Martin Luther King Jr. Civic Center Park at Milvia and Center Street is approximately 0.4 miles north of the site, Becky Temko Tot Lot is approximately 0.4 miles west of the site, and Grove Park is approximately 0.7 miles south of the site. Two BUSD recreation spaces are located within 0.25 miles of the site: Tim Mollering Field (also called Derby Field) is approximately 0.15 miles south of the site, and the athletic fields and track at Berkeley High School are located approximately 0.16 miles north of the site.

Several recreational facilities within the University campus may also serve as parks and recreational uses for residents of the Southside. The University has a general philosophy of keeping the campus open for the public to utilize open spaces (City of Berkeley 2001d).



## **Impact Analysis**

- a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*
- b. *Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?*

The proposed project would not involve the development of new recreational facilities; as described in the *Description of the Project*, the project would provide approximately 15,086 square feet of open space for residents through ground-level gardens and a landscaped roof deck. The project would increase demand for parks and recreational facilities by facilitating residential growth within the project site. As described in Section 13, *Population and Housing*, the proposed project would increase City population by approximately 368 residents compared to existing conditions.

The Open Space and Recreation Element of the Berkeley General Plan cites a goal in the City's 1977 Master Plan of providing two acres of parkland per 1,000 people (City of Berkeley 2001d). As described in the *Recreation Setting* section above, the General Plan found that the city includes approximately 12 acres per 1,000 residents, including local, regional, and State parks, which substantially exceeds the City's goal. The project's estimated 368 new residents would not substantially reduce the ratio of parkland per 1,000 residents. The proposed project would therefore not require the construction or expansion of facilities which may have an adverse physical effect on the environment. Impacts related to parks and recreational spaces would be less than significant. Further analysis in an EIR is not warranted.

### **LESS THAN SIGNIFICANT IMPACT**

# 16 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

This section is based on the Transportation Impact Analysis (TIA) prepared by Abrams Associates Traffic Engineering Inc. in June 2020. The TIA is included in this report as Appendix TIA.

## Transportation Setting

### Roadways

The roads that would be primarily affected by the project are Shattuck Avenue, Dwight Way, Blake Street and Milvia Street. The following is a brief description of these roadways:

- **Shattuck Avenue:** Shattuck Avenue is a four-lane arterial roadway extending south from Vine Street to terminate to the south at Telegraph Avenue in the City of Oakland. It serves school, residential and commercial traffic and is an important north-south travel route. It is designated as a major street and a primary transit route in the City's General Plan.
- **Blake Street:** Blake Street is a two-lane local roadway in the City of Berkeley. It extends east from San Pablo Avenue and terminates to the east at Telegraph Avenue. There is a traffic signal at its intersection with Telegraph Avenue, but the remainder of its intersections are controlled by stop signs and traffic circles. Please note that at the intersection of Blake Street with Martin Luther King Jr. Way the side streets are restricted to right turns only from 4:00 to 6:00 PM, Monday through Friday.
- **Milvia Street:** Milvia Street is a two-lane collector street extending north from Russell Road to Yolo Avenue. It serves school, residential and commercial traffic and is designated as an important north-south bicycle boulevard.

- **Dwight Way:** Dwight Way is a two-lane roadway extending east from Fourth Street to the northeastern corner of the University of California's Clark Kerr campus. It serves school, residential and commercial traffic and is an important east-west travel route. It is a one-way street with eastbound traffic only between Martin Luther King Jr. Way and Piedmont Avenue. It is designated as a major street and a secondary transit route in the City's General Plan.

### *Pedestrian and Bicycle Facilities*

Bicycle paths, lanes and routes are typical examples of bicycle transportation facilities, which are defined by Caltrans as being in one of the following three classes:

- **Class I:** Provides a completely separated facility designed for the exclusive use of bicyclists and pedestrians with crossing points minimized.
- **Class II:** Provides a restricted right-of-way designated lane for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and cross-flows by pedestrians and motorists permitted.
- **Class III:** Provides a right-of-way designated by signs or permanent markings and shared with pedestrians and motorists.

The portion of Milvia Street north of Allston Way is a Class III bike route and is designated as a bicycle boulevard with signage and markings encouraging motorists to share the road with bicyclists. This bike route is approximately 0.4 mile north of the project site.

### *Transit Facilities*

The Downtown Berkeley BART station is located on Shattuck Avenue at Center Street, which is just under a half-mile from the project site. This station is located on the Richmond-Fremont Line which connected to other destinations in the Bay Area at the MacArthur Station. There is also direct service to Downtown San Francisco as well as continuing service to Millbrae. There is also extensive bus transit service provided by Alameda-Contra Costa County (AC) Transit and University of California shuttle services at the BART Station.

## **Regulatory Setting**

### *Senate Bill 743 and Vehicle Miles Traveled*

Senate Bill (SB) 743 was signed into law by Governor Brown in 2013 and tasked the State Office of Planning and Research (OPR) with establishing new criteria for determining the significance of transportation impacts under the California Environmental Quality Act (CEQA). SB 743 requires the new criteria to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." It also states that alternative measures of transportation impacts may include "vehicle miles traveled, vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated."

On September 27, 2013, California Governor Jerry Brown signed SB 743 into law and started a process that changes transportation impact analysis as part of CEQA compliance. SB 743 requires the Governor's OPR to identify new metrics for identifying and mitigating transportation impacts within CEQA. In January 2018, OPR transmitted its proposed CEQA Guidelines implementing SB 743 to the California Natural Resources Agency for adoption, and in January 2019 the Natural Resources Agency finalized updates to the CEQA Guidelines, which incorporated SB 743 modifications, and are now in effect. SB 743 changed the way that public agencies evaluate the transportation impacts of

projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (Public Resource Code, § 21099 (b)(2)). In addition to new exemptions for projects consistent with specific plans, the CEQA Guidelines replaced congestion-based metrics, such as auto delay and level of service (LOS), with VMT as the basis for determining significant impacts, unless the Guidelines provide specific exceptions.

OPR recommends that residential development that would generate vehicle travel that is 15 or more percent below the existing residential VMT per capita, measured against the region or city, may indicate a less than significant transportation impact (OPR 2018).

### *City of Berkeley*

CEQA Guidelines Section 15064.3(b) indicates that land use projects would have a significant impact if the project resulted in vehicle miles traveled (VMT) exceeding an applicable threshold of significance. In June 2020, the City of Berkeley developed VMT Criteria and Thresholds for VMT analysis according to the guidance from OPR:

- A residential project's VMT impact is considered less-than-significant if its household VMT per capita is at least 15% below the regional average Household VMT per capita.
- An employment-generating project's VMT impact is considered less-than-significant if its home-work VMT per worker is at least 15% below the regional average home-work VMT per worker.

In addition, the City of Berkeley has developed screening criteria to provide project applicants with a conservative indication of whether a project could result in potentially significant VMT impacts. If the screening criteria are met by a project, the applicant would not need to perform a detailed VMT assessment for their project. The City's screening criteria include the following:

- Projects within Transit Priority Areas
- Low-income housing projects
- Small Projects: Projects defined as generating 836 daily VMT or less
- Locally Serving Public Facility: Projects that generally encompass government, civic, cultural, health, and infrastructure uses which contribute to and support community needs and mostly generate trips within the local area
- Projects in Low VMT Areas: Projects that are located in low-VMT areas and that have characteristics similar to other uses already located in those areas can be presumed to generate VMT at similar rates. The low-VMT areas in Berkeley are defined based on the results of the Alameda CTC model, and maps of these areas are attached to this report
  - Residential projects will be screened out if located in an area that has household VMT per capita that is 15% lower than the baseline regional average.
  - Office and industrial projects will be screened out if located in an area that has homework VMT per worker that is 15% lower than the baseline regional average.

As described in Section 7, *Greenhouse Gas Emissions*, the project site is in a Transit Priority Area. In addition, the project is located in a low VMT area for residential projects (City of Berkeley 2020b).

## Impact Analysis

- a. *Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?*

### *Roadway Facilities*

As shown in Table 26 below, operation of the proposed project is expected to generate a net increase in 643 daily vehicle trips, including 25 AM peak hour trips and 29 PM peak hour trips. As described in the TIA prepared for the project, this relatively small increase in traffic would not substantially affect operations of roadways and intersections in the vicinity of the project site.

**Table 26 Proposed Project Trip Generation**

Land Use	Weekday Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
		In	Out	Total	In	Out	Total
Proposed Residential Units (including new and renovated existing)	740	13	36	49	37	23	60
Existing Uses (medical office and light industrial space)	97	20	4	24	10	21	31
<b>Total</b>	<b>643</b>	<b>-7</b>	<b>32</b>	<b>25</b>	<b>27</b>	<b>2</b>	<b>29</b>

Source: Appendix TIA

### *Pedestrian and Bicycle Facilities*

The Traffic Impact Analysis concludes that the proposed project would not generate a significant increase in pedestrian traffic in the area (in comparison to the existing volumes) given its size (Appendix TIA). Based on data from MTC Bay Area Travel Survey for projects within 0.5 mile of a BART station during the peak commute hours, the project is expected to generate approximately six bicycle trips and 33 pedestrian trips. In addition to this relatively low trip generation, the project would not significantly impact or change the design of existing pedestrian or bicycle facilities. In addition, the proposed project would provide new bicycle facilities, including indoor and outdoor bicycle parking areas and would be located within 0.4 mile of a Class III bike route along Milvia Street, north of Allston Way. Therefore, while the project would add some pedestrians and bicyclists who would utilize sidewalks and bicycle facilities in the area, the increase would not cause substantial changes to the pedestrian or bicycle traffic in the area. Impacts would be less than significant. Impacts would be less than significant, and further analysis in an EIR is unwarranted.

### *Transit Facilities*

The proposed project would not interfere with existing bus routes and would not remove or relocate existing bus stops. The project also would not conflict with transit plans or goals of the City of Berkeley. Based on its size, the project is anticipated to generate 43 transit trips. This minimal increase would not result in a degradation of the level of service (or a significant increase in delay) on roadway segments currently being utilized by bus transit in the area. Impacts would be less than significant, and further analysis in an EIR is unwarranted.

## **LESS THAN SIGNIFICANT IMPACT**

- b. *Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?*

As described in the *Regulatory Setting* section above, SB 743 requires that lead agencies use vehicle miles traveled (VMT) as the basis for determining significant transportation impacts. VMT per capita is calculated as the total annual miles of vehicle travel divided by the total population in a specific area. Daily VMT per capita is the average number of vehicle miles that a person in each area travels per day. The proposed project would meet two of the City of Berkeley screening criteria for VMT impacts: the site is within a Transit Priority Area and is in a low VMT area for residential projects. As the screening criteria are met by the project, a detailed VMT assessment is not required. Therefore, the project would not result in significant impact and a detailed traffic assessment is not required.

Nevertheless, the project applicant has provided a detailed assessment of the project's impacts on VMT (Appendix TIA). As described in the TIA, the MTC Travel Demand Model divides areas within MTC's jurisdiction into transportation analysis zones, or TAZs. The MTC Travel Model includes 35 TAZs within the City of Berkeley that vary in size. TAZs are used in transportation planning models for transportation analysis and other planning purposes. The project site is in TAZ 1011. The proposed project would be expected to have similar VMT as other residential developments in the same TAZ. The VMT per capita estimated by the MTC Travel Model for the TAZ 1011 would therefore be assumed represent the approximate VMT per capita that would be generated by the proposed project.

**Table 27 Daily Vehicle Miles Traveled Per Capita**

Area	2020	2040 (Projected)
TAZ 1011	7.90	6.52
City of Berkeley	9.62	8.73
Bay Area	15.0	13.8

Source: Appendix TIA

Table 27 above summarizes the 2020 and 2040 per capita VMT for TAZ 1011 and provides a comparison to regional and City per capita averages. It is expected that, as shown for the TAZ where the project site is located, the project would have a lower VMT per capita than the City of Berkeley or Bay Area region averages under both 2020 and 2040 conditions. The project's VMT would also be more than 15 percent below the projected City and regional averages, which, as described in the *Setting* section, is the threshold of significance suggested by OPR. Impacts would therefore be less than significant, and further analysis in an EIR is unwarranted.

#### **LESS THAN SIGNIFICANT IMPACT**

- c. *Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?*

Project implementation would occur on an existing private property and would not alter or effect existing streets or intersections. The proposed project would be required to comply with the City's design standards for vehicular access and circulation and the Fire Code. The project plans would be reviewed by the City's Transportation Engineer and Fire Department to ensure compliance with these regulations prior to approval of building permits for the project. Compliance would prevent hazardous design features and would ensure adequate and safe site access and circulation. The

proposed project would involve residential uses on a site designated for residential uses; the project would not introduce incompatible uses, including vehicles or equipment, to the site or the surrounding area. There would be no impact, and further analysis in an EIR is not warranted.

**NO IMPACT**

*d. Would the project result in inadequate emergency access?*

The project would involve construction of one new curb cut and driveway on Blake Street, which would provide access to the new subterranean garage. The driveway would be approximately 20 feet wide and approximately 100 feet east of the intersection between Blake Street and Mivlia Street. The project would provide adequate emergency access via this driveway. In addition, the proposed project would be required to comply with all building, fire, and safety codes and specific development plans would be subject to review and approval by the City's Public Works Department, Building and Safety Department, and Fire Department. Required review by these departments would ensure the circulation system for the project site would provide adequate emergency access. In addition, the proposed project would not require permanent closures to roadways or changes to existing roadway configurations.

Temporary closures to roadways during construction activities would be subject to the following standard condition of approval:

Transportation Construction Plan. The applicant and all persons associated with the project are hereby notified that a Transportation Construction Plan (TCP) is required for all phases of construction, particularly for the following activities:

- Alterations, closures, or blockages to sidewalks, pedestrian paths or vehicle travel lanes (including bicycle lanes);
- Storage of building materials, dumpsters, debris anywhere in the public ROW;
- Provision of exclusive contractor parking on-street; or
- Significant truck activity.

The applicant shall secure the City Traffic Engineer's approval of a TCP. Please contact the Office of Transportation at 981-7010, or 1947 Center Street, and ask to speak to a traffic engineer. In addition to other requirements of the Traffic Engineer, this plan shall include the locations of material and equipment storage, trailers, worker parking, a schedule of site operations that may block traffic, and provisions for traffic control. The TCP shall be consistent with any other requirements of the construction phase.

Contact the Permit Service Center (PSC) at 1947 Center Street or 981-7500 for details on obtaining Construction/No Parking Permits (and associated signs and accompanying dashboard permits). Please note that the Zoning Officer and/or Traffic Engineer may limit off-site parking of construction-related vehicles if necessary to protect the health, safety or convenience of the surrounding neighborhood. A current copy of this Plan shall be available at all times at the construction site for review by City Staff.

The above condition of approval would ensure that adequate emergency access would be maintained during construction activities. Impacts would be less than significant, and further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT IMPACT**

# 17 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- |  |                          |                          |                                     |                          |
|--|--------------------------|--------------------------|-------------------------------------|--------------------------|
| a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or   | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- a. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?*
- b. *Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1?*

The Chochenyo Ohlone Tribe has requested to be notified, under California Assembly Bill 52 of 2014, of projects proposed in the City of Berkeley. The City of Berkeley initiated AB 52 consultation with the Tribe on February 4, 2019, via email. Under AB 52, Native American tribes are provided 30 days to respond and request further project information and formal consultation. To date, no response has been received by the Chochenyo Ohlone. As such, no tribal cultural resources were identified. The City of Berkeley concluded consultation under AB 52 with the Chochenyo Ohlone on March 3, 2019 after the 30-day response period.

Although no tribal cultural resources are expected to be present on-site, there is the possibility of encountering undisturbed cultural resources that may later be recommended as a TCR by tribal



organizations; however, with the project would be subject to the following City of Berkeley standard Condition of Approval:

Halt Work/Unanticipated Discovery of Tribal Cultural Resources. In the event that cultural resources of Native American origin are identified during construction, all work within 50 feet of the discovery shall be redirected. The project applicant and project construction contractor shall notify the City Planning Department within 24 hours. The City will again contact any tribes who have requested consultation under AB 52, as well as contact a qualified archaeologist, to evaluate the resources and situation and provide recommendations. If it is determined that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with State guidelines and in consultation with Native American groups. If the resource cannot be avoided, additional measures to avoid or reduce impacts to the resource and to address tribal concerns may be required.

Compliance with the above condition of approval would ensure impacts related to tribal cultural resources would be less than significant. Further analysis in an EIR is not warranted.

**LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

## 18 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e. Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Utilities and Service Systems Setting

#### Water Service

Water supply to the project site and surrounding area is provided by the East Bay Municipal Utility District (EBMUD). Approximately 90 percent of the water used by EBMUD comes from the Mokelumne River watershed, and EBMUD transports it through pipe aqueducts to temporary storage reservoirs in the East Bay hills. EBMUD has water rights that allow for delivery of up to a maximum of 325 million gallons per day (mgd) from this source, subject to the availability of runoff and to the senior water rights of other users, downstream fishery flow requirements, and other Mokelumne River water uses. EBMUD is obligated to meet multiple operating objectives, including

providing municipal water supply benefits, stream flow regulation, fishery/public trust interests, flood control, temperature management and obligations to downstream diverters. Among these factors, EBMUD's Mokelumne River flow commitments are generally tied to the variability in the Mokelumne River watershed rainfall and runoff patterns which govern the release requirements for the year.

Northern California's water resources, including EBMUD's supplies, have been stressed by periodic drought cycles. Historical multi-year droughts have significantly diminished the supplies of water available to EBMUD's customers. During the early stages of a drought and throughout a drought period, EBMUD imposes drought management programs to reduce customer demands, thereby saving water for the following year in case drought conditions continue. EBMUD has established a goal of reducing water use by 20 percent district-wide.

EBMUD completed development of a revised Water Supply Management Program (WSMP) 2040 in April of 2012, which is the District's plan for providing water to its customers through 2040. According to the WSMP, EBMUD's water supplies are estimated to be sufficient during the planning period (2010-2040) in normal and single dry years. The WSMP 2040 emphasizes maximum conservation and recycling, with a total of 50 mgd of future supply to be provided from those two strategies. However, looking toward 2040, EBMUD's current supply is insufficient to meet customer needs during multi-year droughts despite EBMUD's aggressive water conservation and recycled water programs. Supplemental supply will also be needed to reduce the degree of rationing and to meet the need for water in drought years.

The Urban Water Management Planning Act of 1983 amended California Water Code to require all urban water suppliers in California to prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. This requirement applies to all suppliers providing water to more than 3,000 customers or supplying more than 3,000 acre-feet per year of water. EBMUD adopted its first UWMP in 1985 and has been updating the plan every five years since then, adjusting for current and projected water usage, water supply programs, and conservation and recycling programs. Water demand projections described in the UWMP account for anticipated future water demands within the EBMUD service territory, and changes in land uses including but not limited to densification and associated increases in water usage. EBMUD's 2015 UWMP estimated the average daily water demand in its service area to be 170 million gpd.

### *Wastewater*

EBMUD also provides wastewater treatment services to the project site and the rest of the City of Berkeley. EBMUD operates the large diameter interceptor sewer generally running along the shoreline of the San Francisco Bay, and the Main Wastewater Treatment Plant (MWWTP) in Oakland. Each property owner in the City is responsible for delivering their sewage to the City's wastewater collection system. The City's wastewater collection system includes the lower lateral and the sewer mainlines in the street or in easements on private property. The City has approximately 456 miles of sanitary sewer mains, and over 30,000 lower laterals. The sewer mains range in age from 1 to over 100-years and vary in size from 6-inches to 48-inches in diameter (Berkeley 2012). The City operates and maintains its sewage collection system in accordance with the NPDES Permit No. CA0038466 issued by the SF Bay Regional Water Quality Control Board that expires on March 31, 2025.

Wastewater from the project site enters the City's wastewater collection system which is then conveyed to EBMUD's WWTP. The WWTP provides primary treatment for up to 320 million gallons per day (MGD) and secondary treatment for up to 168 MGD, and storage basins provide plant

capacity for a short-term hydraulic peak of 415 MGD. On average, about 63 million gallons of wastewater is treated every day at the WWTP (EBMUD 2019).

### Solid Waste

The City of Berkeley is one of the few cities in Northern California to operate its own dual stream recycling and green/food waste collection system as well as material recovery/drop-off and buyback facilities. The City provides curbside recycling and refuse collection services to the Southside. Solid waste and recyclable materials collected by the City and its contracted companies are transported from the Berkeley Transfer Station, located at 1201 Second Street, for sorting or disposal. The Berkeley Transfer Station currently has a permitted capacity of 174,720 tons per year (Apa 2018). One permitted landfill in Alameda County has the capacity to accommodate solid waste generated in Berkeley, the Altamont Landfill. As shown in Table 28, the remaining capacity for solid waste at this landfill is approximately 65.4 million cubic yards. Currently, the City sends all solid waste for disposal to the Altamont Landfill, which is located near the Altamont Pass, northeast of the City of Livermore. The City of Berkeley has achieved a solid waste diversion rate of 68 percent of its solid waste from landfills through recycling and/or composting efforts (City of Berkeley 2020c).

**Table 28 Landfill Capacity Serving City of Berkeley**

Site	Maximum Permitted Throughput per Day		Maximum Permitted Capacity		Remaining Capacity	
	CY <sup>1</sup>	Tons	CY	Tons	CY	Tons
Altamont Landfill Resource Recovery Facility (estimated closure date January 1, 2025)	13,938	11,150	124,400,000	99,520,000	65,400,000	52,320,000

<sup>1</sup> CalRecycle identifies Maximum Permitted Throughput only in Tons/Day, while Maximum Permitted Capacity and Remaining Capacity are only provided in Cubic Yards; therefore, standard conversion factors provided by the EPA (EPA 2016) are used to provide all figures in both Tons and Cubic Yards. EPA identifies a standard conversion factor for Municipal Solid Waste (MSW) compacted to "Landfill Density" of 1,700 pounds per cubic yard, equating to approximately 0.8 ton per cubic yard of compacted MSW. Source: U.S. EPA 2016. Sources: CalRecycle, Solid Waste Information System (SWIS), 2020

## Impact Analysis

- a. *Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?*
- c. *Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

### Wastewater

As described in the *Utilities and Service Systems Setting* section above, EBMUD's WWTP provides primary treatment for up to 320 MGD and secondary treatment for up to 168 MGD, and storage

basins provide plant capacity for a short-term hydraulic peak of 415 MGD. Moreover, the WWTP treats an average of 63 million gallons of wastewater every day.

As shown in Table 29, the proposed project would generate approximately 16,360 gallons of wastewater per day. The increase in wastewater generation associated with the project would be approximately 0.02 percent of the 65 million gallons currently treated each day by EBMUD's WWTP. With the additional wastewater from the project, the daily treated wastewater would be well within the WWTP's total 168 MGD secondary treatment capacity and 320 MGD primary treatment capacity. Therefore, EBMUD would have adequate capacity to service the project.

**Table 29 Estimated Project Wastewater Generation**

Type of Use	Quantity	Generation Factor (daily gallons per unit)	Amount (gallons per day)
Residential – Studio unit	127	80	10,160
Residential – 1 bedroom unit	9	120	1,080
Residential – 2 bedroom unit	32	160	5,120
<b>Total</b>	<b>168</b>	<b>N/A</b>	<b>16,360</b>

Notes: sf= square feet, du=dwelling unit

Source: City of Los Angeles CEQA Thresholds Guidelines (2006)

The proposed project would involve installation of a new lateral connection to the City's existing sewer system. At this stage of the project, it is not possible to determine how the proposed project would be served by the existing sewer collection system. Since the project site fronts on both Dwight Way and on Blake Street, it is not possible to determine which sewer main(s) the sewer lateral(s) would be connected to. Prior to approval of building permits, the Public Works Department would require the applicant to provide a sewer capacity analysis to show that the project's sewer demand would not exceed the capacity of the existing sewer mains in the street from the sewer connection(s) downstream to McKinley Avenue. The project would also be required to comply with the City of Berkeley's Private Sewer Lateral (PSL) Ordinance (BMC Chapter 17.24). The PSL Ordinance is consistent with the requirements of EBMUD's Regional Private Sewer Lateral Ordinance and includes regulations for the inspection, testing, repair, replacement, and ongoing maintenance of private sewer laterals. Under the PSL Ordinance, the project applicant would be required to upgrade or verify the condition of private sewer laterals within the site before approval of project building permits. The Ordinance would also require that the project eliminate wet-weather infiltration and inflow to avoid impacts related to significant increases in wastewater flow during storms. Impacts related to wastewater infrastructure would be less than significant, and further analysis in an EIR is not warranted.

### *Water Supply*

As described in the *Utilities and Service Systems Setting* section above, EBMUD's 2015 UWMP estimated the average daily water demand in its service area to be 170 million gallons per day (gpd).

According to reference material provided by EBMUD the average water demand of dwelling units such as the units proposed under the project is 65 gpd per resident (Metcalf & Eddy, Inc. 1991). As described in Section 13, *Population and Housing*, the project would include 383 total residents.

Therefore, operation of the proposed project would generate 24,895 gpd. The additional water demand created by the project represents 0.01 percent of the current water demand. In addition, EBMUD's future water supply assessment is based on population growth and, as discussed in Section 13, *Population and Housing*, the proposed project would not increase population beyond the growth expected for the City of Berkeley. Therefore, EBMUD infrastructure and facilities would have adequate capacity to service the project, and construction and operation of the project would not require new or expanded water supply facilities. Impacts would be less than significant, and further analysis in an EIR is not warranted.

### *Stormwater*

The proposed project would reduce the total area of impervious surfaces from approximately 41,000 square feet to approximately 30,000 square feet. This reduction would increase the potential for groundwater recharge and reduce stormwater runoff from the site. In addition, as discussed in Section 9, *Hydrology and Water Quality*, the proposed project would be required to comply with all applicable stormwater management requirements, including the City's Municipal Regional Stormwater Permit. Therefore, the proposed project would not result in the need for new off-site storm water drainage facilities. Site runoff would be directed to the City's existing municipal storm drainage system, which was designed to accommodate flows resulting from buildout in the project area. In addition, as described in Section 9, *Hydrology and Water Quality*, the project would result in a net reduction of impervious surfaces within the project site and would therefore not result in an increase in surface runoff compared to existing conditions. Impacts would be less than significant, and further analysis in the EIR is unwarranted.

### *Electricity, Natural Gas, and Telecommunications*

Electricity and natural gas would be provided to the project site by PG&E. Telecommunications services would be provided by AT&T, SBC Telecom, or other providers, at the discretion of future tenants. Telecommunications are generally available within and near the project site, and facility upgrades would not likely be necessary.

As described in Section 5, *Energy*, project operation would consume approximately 0.8 GWh of electricity and 1,532 therms of natural gas per year. The proposed project's electricity demand would be served by PG&E, which provided approximately 10,417 GWh of electricity to Alameda County in 2018; therefore, PG&E would have sufficient supplies for the proposed project (CEC 2018a). The proposed project's natural gas demand would be serviced by PG&E, which provided approximately 4,715 MMthm per year in 2017; therefore, PG&E would have sufficient supplies for the proposed project (CEC 2017b). Additionally, each proposed residential unit would include rooftop solar PV panels that would further offset energy consumption. Improvements to existing facilities or the provision of new electricity and natural gas facilities is not anticipated. The proposed project would have a less than significant impact on local electricity, natural gas, and telecommunications providers and further analysis in an EIR is unwarranted.

### **LESS THAN SIGNIFICANT IMPACT**

- b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?*

As described under questions (a) and (c), potable water to the project site would also be provided by EBMUD. According to EBMUD's 2015 Urban Water Management Plan (UWMP), EBMUD anticipates having an adequate water supply to meet demand in its service area, except during the

third year of a multi-year drought starting around 2025 or later. During multi-year drought, EBMUD may require substantial reductions in water use by customers and may also need to acquire supplemental supplies to meet demand (EBMUD 2015).

EBMUD's system storage generally allows EBMUD to continue serving its customers during dry-year events. EBMUD typically imposes water use restrictions based on the projected storage available at the end of September and, based on recent changes to its Demand Management Plan (DMP) Guidelines, may also implement water restrictions in response to a State of California mandate. By imposing water restrictions in the first dry year of potential drought periods, EBMUD attempts to minimize water use restrictions in subsequent years if a drought persists. Throughout dry periods, EBMUD must continue to meet its current and subsequent-year fishery flow release requirements and obligations to downstream agencies. The UMWP 2015 includes DMP Guidelines that establish the level of water use restrictions EBMUD may implement under varying conditions. Under DMP Guidelines, water use restrictions may be determined based upon either projected end-of-September Total System Storage (TSS) or water use restriction mandates from the SWRCB. When State-mandated water use restrictions exceed the reductions that would otherwise be called for based upon end-of-September TSS, EBMUD's water use reduction requirements may be guided by the applicable State mandates. Under either scenario, while EBMUD strives to keep water use reductions at or below 15 percent, if the drought is severe, mandatory water use reductions could exceed 15 percent. The proposed project would be subject to the same drought restrictions that apply to all EBMUD customers.

The proposed project would generate net new demand of approximately 19,632 gallons of water per day, or approximately 0.01 percent of the current water demand. Despite the conclusions in the UWMP that deficits are projected for multi-year droughts, compliance with the water conservation regulations and policies would help to maintain sufficient supplies for the proposed project. The project would be subject to the California Code of Regulations concerning water-efficient landscapes (Division 2, Title 23, CCR, Chapter 2.7, Sections 490 through 495) and to the Water Conservation Act of 2009. The Water Conservation Act of 2009 sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. Moreover, in event of a multi-year drought, residents of the proposed project and other EBMUD customers would be subject to a Demand Management Plan and other water conservation requirements that will address any shortage in supply. Therefore, there would be sufficient water supply to serve the project and overall service area demand, with demand management during multi-year drought conditions. Impacts related to water supply would be less than significant.

#### **LESS THAN SIGNIFICANT IMPACT**

- d. Would the project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?*
- e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?*

As described in the *Utilities and Service Systems Setting* section above, the permitted landfill in Alameda County serving Berkeley, the Altamont Landfill, has a remaining capacity of 65.4 million cubic yards, or 52.3 million tons.

The proposed project would increase solid waste generation in Berkeley by adding new residential units to the City's housing supply. CalRecycle estimates that multi-family residential uses generate an average of four pounds of solid waste per unit per day (Cal Recycle 2018).

As shown in Table 30, prior to implementation of recycling programs or State-mandated diversion requirements, operation of the proposed project would generate an estimated 672 net pounds per day of solid waste, or 0.34 tons per day. In accordance with California's Integrated Waste Management Act of 1989, cities and counties are required to divert 50 percent of all solid wastes from landfills. The City of Berkeley has achieved a solid waste diversion rate of 68 percent (City of Berkeley 2020c). Assuming that this diversion rate continues to apply to new development in Berkeley, the project would generate an additional 0.11 tons per day of solid waste for disposal at landfills. This total need for waste disposal would represent less than 0.01 percent of the current total remaining landfill capacity for the landfills that serve Berkeley. Therefore, solid waste generated by the project would not exceed the capacity of local solid waste infrastructure.

**Table 30 Estimated Solid Waste Generation**

Land Use	Size	Generation Rate*	Total (lbs/day)	Total (tons/day)
Residential (Single Family)	168 units	4 lbs/du/day	672	0.34
<b>Total Assuming 68% Diversion Rate</b>			<b>215</b>	<b>0.11</b>

Notes: lbs= pounds; sf = square feet; du = dwelling unit

Source: CalRecycle Waste Generation Rates 2016. <https://www2.calrecycle.ca.gov/WasteCharacterization/General/Rates>

In addition, the project would be required to comply with federal, state, and local statutes and regulations related to solid waste. Prior to construction activities, the project applicant would be required to prepare a Construction Demolition Recycling Plan prior to issuance of a demolition permit. The purpose of the Construction Demolition Recycling Plan is to divert as much debris as possible from the waste stream. Therefore, anticipated rates of solid waste disposal from the proposed project would have a less than significant impact related to solid waste disposal facilities.

#### **LESS THAN SIGNIFICANT IMPACT**



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# 19 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?*
- b. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?*
- c. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?*

- d. *If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?*

The project site is not located in or near a state responsibility area or very high fire hazard severity zone for wildland fires (CalFire 2007, 2008). The closest very high hazard severity zone is approximately one mile east of the project site, and intervening areas are developed with urban uses. Therefore, there would be no impacts related to wildfire and further analysis in an EIR is not warranted.

**NO IMPACT**

## 20 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Does the project:				
a. Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- a. *Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?*

Based on the information and analysis provided throughout this Initial Study, implementation of the proposed project would not substantially would not substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, or reduce the number or restrict the range of rare or endangered plants or animals.

City of Berkeley standard conditions of approval would reduce potential impacts of disturbing archaeological and tribal cultural resources and human remains. However, as discussed in Section 4,

*Cultural Resources*, the project could result in potentially significant impacts to existing historic resources. This impact is potentially significant and will be discussed further in an EIR.

#### **POTENTIALLY SIGNIFICANT IMPACT**

- b. *Does the project have impacts that are individually limited, but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?*

Cumulative impacts associated with some of the resource areas discussed in this Initial Study are addressed in the individual resource sections above: air quality, greenhouse gases, water supply, and solid waste (CEQA Guidelines Section 15064(h)(3)) and would be less than significant. Some of the other resource areas were determined to have no impact in comparison to existing conditions and therefore would not contribute to cumulative impacts, such as mineral resources and agricultural resources. As such, cumulative impacts in these issue areas would also be less than significant (not cumulatively considerable). As described in Section 16, *Transportation*, the project’s VMT per resident would result in less than significant impacts. Based on technical guidance from the Governor’s Office of Planning and Research, if a project has a less than significant impact on VMT using an efficiency-based threshold (e.g., VMT per resident), this implies that the project would not contribute to a cumulative VMT impact (OPR 2018). The proposed project would involve construction and operation of a multi-family residential development and would be consistent with the City’s General Plan designation and development standards for the site.

As described in Section 4, *Cultural Resources*, impacts related to historical resources are potentially significant and will be analyzed further in an EIR. Therefore, cumulative impacts related to historical resources are also potentially significant and will be discussed further in an EIR.

#### **POTENTIALLY SIGNIFICANT IMPACT**

- c. *Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?*

Effects to human beings are generally associated with air quality, noise, traffic safety, geology/soils and hazards/hazardous materials. As discussed in this Initial Study, implementation of the proposed project would result in less than significant impacts related to these issues. The proposed project would therefore not cause substantial adverse effects on human beings, either directly or indirectly. Impacts would be less than significant with mitigation incorporated. Further analysis in an EIR is not warranted.

#### **LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED**

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